

THE LIST WILL CLOSE ON MONDAY, NOV. 20TH.

The Fish Supply Company (Limited).

CAPITAL £30,000, IN 6000 SHARES OF £5 EACH.

FIRST ISSUE of 4000 SHARES, payable 10s. on application.

DIRECTORS.

W. MOLESWORTH ST. AUBYN, Esq., M.P., Chairman, 1, Brick Court, Temple.
 ARTHUR NASH, Esq., Botley House, Patshull Place, N.W.
 JOHN PENBERTHY, Esq., Royal Veterinary College, N.W.
 CHARLES ROUGHT, Esq., 23, Bridge Avenue, Hammersmith, W.
 T. H. DENNIS ALLEN, Esq., Managing Director Devon and Cornwall Dairy Farm Company (Limited), 217, Camden Road, N.W.

MANAGER—MR. DAN. HOLLAND GIBBARD.

SOLICITORS—Messrs. WALKER, SON, and FIELD, 1, Gresham Buildings, Basinghall Street, E.C.

BANKERS—THE LONDON AND SOUTH-WESTERN BANK (LIMITED), 7, Fenchurch Street, E.C.

AUDITORS—Messrs. SAMUEL J. BENNETT and CO., Chartered Accountants, 70 and 71, Bishopsgate Street Within, E.C.

SECRETARY—GEO. RICHARDSON, Esq.

TEMPORARY OFFICES—11, QUEEN VICTORIA STREET, E.C.

ABRIDGED PROSPECTUS.

This company is formed to meet one of the most urgent wants of the present time—namely, the supply of all kinds of fresh, dried, and kippered fish, shell-fish, &c., direct from the sea-coast, also ice, poultry, game, &c.

The directors have secured on most advantageous terms the six first-class businesses so well known and trading as the Fish Supply Company, now going concerns, and the report of Messrs. Bennett

and Co., chartered accountants, shows the net weekly profit of these shops to be £24, or £1248 per annum, or over 35 per cent. on the purchase-money—£450 cash, and 600 shares. Twenty-five shops *pro rata* would show £100 per week, or £5200 per annum, which figures on a paid-up capital of £10,000 speak for themselves.

Prospectuses, with full particulars and forms of application for shares, can be obtained of the bankers, solicitors, or of the secretary at the company's offices.

Rhondda and Swansea Bay Railway COMPANY.

A NEW AND SHORT THROUGH ROUTE BETWEEN THE RHONDDA VALLEY COAL FIELD AND THE SWANSEA BAY PORTS.

ISSUE of £450,000 in 45,000 SHARES of £10 each, payable as follows:—

£1 on application, £1 on allotment, £2 on 1st January, 1883. Further calls at intervals of not less than three months, interest at the rate of 5 per cent. per annum on the uncalled capital paid in advance. The liability of shareholders is limited to the amount of their shares.

DIRECTORS.

The Right Hon. the EARL OF JERSEY, Chairman.
 Sir JOHN JONES JENKINS, M.P., Llanelli, Deputy-Chairman.
 Sir HENRY HUSSEY VIVIAN, Bart., M.P., Glamorganshire.
 CHARLES BATH, Esq., Director of the Glamorganshire Bank. (Firm of Henry Bath and Son, Swansea, London, and Liverpool.)
 THOMAS CORY, Esq. (Firm of Cory, Yeo, and Co., Swansea and London.)
 THOMAS DAVIES DANIEL, Esq. (Firm of Mansel Tinplate Company, Aberavon.)
 JOHN RICHARDSON FRANCIS, Esq. (Firm of Richardson and Co., Swansea and London.)
 MORGAN BRANSBY WILLIAMS, Esq., Chairman of the Swansea Bank, Director of the Dunaburg and Witepsk Railway.

BANKERS.

Messrs. BARCLAY, BEVAN, and CO., Lombard Street, London.
 THE GLAMORGANSHIRE BANKING COMPANY, Swansea.
 ENGINEERS—Messrs. S. H. YOCKNEY and SON, M.M. Inst. C.E., 46, Queen Anne's Gate, Westminster.
 SOLICITORS—Messrs. STRICKS and BELLINGHAM, Swansea.
 SECRETARY AND OFFICES—MR. H. S. LUDLOW, No. 8, FISHER STREET, SWANSEA.

ABRIDGED PROSPECTUS.

The directors of the Rhondda and Swansea Bay Railway Company, incorporated by Special Act of Parliament, which received the Royal Assent on the 10th of August, 1882, are prepared to receive APPLICATIONS for the SHARE CAPITAL of the company, amounting to £450,000, in 45,000 shares of £10 each.

The Act authorising this railway was obtained after a severe Parliamentary contest, and an exhaustive enquiry in both Houses.

Its object is the construction of a railway from the Taff Vale Railway, in the Rhondda Valley, to the Swansea Bay ports.

Official returns show the enormous extent and expansion of the coal trade of the Rhondda Valley. The population is now 13 times as large as it was in 1861, and is rapidly increasing.

The railway communicates with the Taff Vale Railway system, and will provide good access from the Rhondda Valley to Swansea and Swansea Bay ports, enabling shipping to obtain cargoes of Rhondda coal, which, although greatly required, cannot now be procured there.

The company's route will reduce the distance by rail from Treherbert, in the Rhondda Valley, to Swansea from 54 miles to 25 miles; the time from three hours to a little over one hour and a half; and the third-class fares from 4s. 8d. to 2s. 1d.

Thus more than 50 per cent., both in time and money, will be saved by the company's route, which will command the traffic.

The local traffic may be much augmented by through traffic in connection with the Taff Vale and other railways between Pontypool, Newport, and Swansea, the company's route being shorter than the present, and will pass for nearly the whole distance through the coal basin, thus accommodating the mining population.

Another very important feature in favour of the proposed railway is, that it will serve an extensive new coal field in the Avan Valley, through the centre of which it runs, and which contains practically unlimited quantities of valuable coal.

The mining and labouring populations of the Rhondda Valley have at present no direct railway communication with the sea-side resorts in the beautiful Bay of Swansea. The company's railway will reduce the distance from 42 to 15 miles. Such facility cannot fail to create a large holiday traffic.

This railway will also enable them to avail themselves of the well-supplied markets of Swansea, Neath, and Aberavon, whilst the dairy and farm produce of Carmarthenshire and Pembrokeshire will find a ready sale in the Rhondda Valley.

The line falls practically the whole way, with the load, to the sea-ports—a special advantage for heavy coal traffic, as in the case of the Taff Vale Railway, worked with such eminent success and profit.

It is encouraging to note the large dividends paid by the other two existing railways carrying coals from the Rhondda and Aberdare Valleys to the seaport, viz.:—

Taff Vale Railway Company 18 per cent.
 Rhymney Railway Company (having no access to the Rhondda Valley) 12 "

There are extensive docks at Port Talbot and Briton Ferry, and three excellent and well-appointed docks at Swansea, including the magnificent "Prince of Wales Dock," suitable for the largest ocean steamers.

The import trade into Swansea of minerals of all descriptions exceeds that of any other port in the kingdom, so that not only is the Rhondda steam coal required for shipment, but the small and bituminous coals are much needed by the coal consuming works—copper, silver, gold, lead, zinc, nickel, cobalt, tin-plate, iron, steel, chemical, complex-ore works, and other manufactories, which abound in the districts of Port Talbot, Briton Ferry, Neath, and Swansea. Swansea is also the chief seat of the patent fuel industry. Large quantities of coal for these and other requirements must necessarily pass over the company's railway.

Swansea has the great advantage of being 45 miles nearer the ocean than any other great port in the Bristol Channel, and is the only one actually within the coal field radius.

Thoroughly to appreciate the prospects of the undertaking as a dividend-paying property, it should be borne in mind that the line when completed will not only create a large local traffic, but that from the exceptional facilities of transport and shipment which it will afford, it must command a considerable share of the coal export from the Rhondda Valley.

Taking as a basis for calculation the returns for last year, and assuming that 1,500,000 will be carried by this line, it would produce a gross revenue of £81,250, or deducting 50 per cent. for working expenses, a net sum of £40,625, alone sufficient to pay 7½ per cent. on the share capital of the company after providing for interest on the amount of the borrowing powers of the company.

If in addition to this the receipts from other sources, namely, the Avan Valley Coal Field, the passenger, local, import, and miscellaneous traffic, and the mails be taken at even the very low estimate of £23 per mile per week, it gives, after deducting 50 per cent. for working expenses, a further net income of £11,362, equal to 2½ per cent. on the share capital.

Thus it will be seen that, even from the opening, there is every reason to expect that it will be a 10 per cent. dividend-paying line, and that with the natural growth of the traffic it will eventually rank with the most prosperous railway enterprise in the South Wales coal basin.

The line is to be opened in sections as each is completed, and it is expected that the first portion will be ready for traffic in the course of next summer.

Shares will be allotted in order of priority of application; where no allotment is made the deposit will be returned in full.

Full Prospectuses, with Forms of Application, can be obtained of the bankers, solicitors, engineers, or secretary, 8, Fisher-street, Swansea. Also of the under-mentioned bankers, at

Birmingham—Birmingham and Midland Bank.
 Bristol—Messrs. Miles, Cave, Baillie, and Co.
 Gloucester—Gloucestershire Banking Company.
 Hull—Samuel Smith Brothers and Co.
 Liverpool—Bank of Liverpool.
 Manchester—Manchester and Salford Bank.
 Salisbury—Wilts and Dorset Bank, Salisbury, and branches.
 Truro—Devon and Cornwall Bank.
 Ireland—National Bank, Dublin, and branches.
 Scotland—Edinburgh, British Linen Company Bank, and branches.

Registration of New Companies.

The following joint-stock companies have been duly registered—

THE BECKENHAM PUBLIC HALL COMPANY (Limited).—Capital 10,000l., in shares of 1l. To provide and maintain a local hall, buildings, &c. The subscribers (who take one share each) are—M. S. Sturgis, Beckenham; C. E. Atkinson, Beckenham; R. Milburn, Beckenham; W. S. Vian, Beckenham; W. A. de V. Brownlowe, Beckenham; W. C. Sullivan, Beckenham; J. Hudson, Beckenham; P. Bicknell, Beckenham.

THE IRISH INDUSTRIAL CO-OPERATIVE ASSOCIATION (Limited).—Capital, 10,000l., in shares of 1l. The purchase and sale of guaranteed Irish manufactured and other goods. The subscribers are—F. Porter, 30, Besborough-street, 10; J. Rogers, Bermondsey, 2; J. McGrath, 12, Park-street, 4; M. Higgins, 30, Bowles-road, 10; E. Power, Limehouse, 10; T. Kissane, 73, Long-lane, 10; J. Driscoll, Poplar, 5.

PATENT TRIANGULAR NAIL COMPANY (Limited).—Capital 10,250l., in shares of 5l. The importation, purchase, manufacture, and sale of triangular and other nails. The subscribers (who take one share each) are—W. J. Bordier, 44, Coleman-street; A. Clark, 44, Coleman-street; J. A. Powey, 2, Cophall Buildings; F. Brainchi, 50, Gresham-street; G. Beste, 44, Coleman-street; C. A. Bordier, 44, Coleman-street; S. F. Ferrier, 44, Coleman-street.

T. BELL AND COMPANY (Limited).—Capital 14,000l., in shares of 10l. The business of chemical manufacturers, chemists, chemical manure manufacturers, merchants, dealers, &c. The subscribers are—F. W. Berk, 1, Fenchurch Avenue, 100; R. Berk, 1, Fenchurch Avenue, 1; D. H. Wymuller, 35, Mildmay Park, 1; T. F. Duncan, 14, Percy Circus, 1; F. Parr, 19, Lambton-road, 1; G. A. Berk, Clapton, 1; A. J. Greenip, 9, Gracechurch-street, 1.

GEORGE HOPTON AND COMPANY (Limited).—Capital 50,000l., in shares of 10l. To purchase and carry on a wheel and bent wood manufacturing business situated in Manchester-street, King's Cross. The subscribers are—W. Thornton, 164, Stanhope-street, 100; R. Kent, 83, Patshull-road, 100; F. Ohlson, Middle-lane, 100; W. King, Leighton Buzzard, 100; C. Campion, 8, Acton-street, 100; J. J. Knight, 40, Hemingford-road, 100; J. Tuson, 4, Weston-street, 5.

COMPANY OF AUCTIONEERS, VALUERS, AND ESTATE AGENTS (Limited).—Capital 14,000l., in shares of 1l. These several businesses in all branches. The subscribers (who take one share each) are—J. A. Kilman, 227, High Holborn; A. G. Henderson, Wood Green; W. G. Mark, 27, Enfield-road; J. C. Luter, 9, Camomile-street; D. Brodie, 27, Brownlow Mews; G. Alexander, 52A, Drury-lane; G. A. D. Kelman, 229, High Holborn.

THE STEAMSHIP "EURIPIDES" COMPANY (Limited).—Capital 28,800l., in shares of 100l. Purchasing, owning, and working said steamer. The subscribers (who take one share each) are—W. H. Legge, Liverpool; E. E. Wylie, Liverpool; H. K. Laybourn, Liverpool; T. K. Legge, Liverpool; D. Laybourn, Liverpool; M. C. de Potherrier, Liverpool; H. Maryat, Liverpool.

THE WASTE PRODUCTS COMPANY (Limited).—Capital 100,000l., in shares of 1l. To acquire certain patents and carry on the business of dealers in various products, and of engineers, machinists, importers of oils, &c. The subscribers (who take one share each)—A. J. Faulding, New Barnet; J. Hutchings, Cowley; G. H. Allen, 81, St. John's Wood-terrace; A. W. Paterson, Wood Green; F. Barton, Maids Vale; A. Kerly, 14, Great Winchester-street; A. L. Kerly, 14, Great Winchester-street.

"SCAW FELL" STEAMSHIP COMPANY (Limited).—Capital 36,500l., in shares of 100l. Purchasing, owning, and working said steamship. The subscribers (who take one share each) are—W. H. Fletcher, Liverpool; W. Stone, Liverpool; F. M. Hull, New Brighton; H. B. Smith, Liskeard; W. Gracie, Liverpool; E. A. Beazley, Liverpool; R. Jackson, Liverpool.

THE CAPITAL WINE COMPANY (Limited).—Capital 20,000l., in shares of 1l. To acquire and continue a business established at 55, Old Broad-street, E.C. The subscribers (who take one share each) are—C. A. Wilson, 52, Walterton-road; P. Skar, 110, Cannon-street; C. A. Walter, 55, Old Broad-street; R. Everitt, 55, Old Broad-street; J. W. H. Byrne, 14, St. Swithin's-lane; J. Melling, Dashwood House; R. Uhlisch, 37, King William-street.

THE ALBION BAKERY COMPANY (Limited).—Capital 50,000l., in shares of 10l. To acquire by purchase and carry on a business situate at 124, Brompton-road. The subscribers (who take one share each) are—W. Cox, 121, Brompton-road; J. W. Stabberfield, Brixton; W. Cutbush, 27, Hill-street; J. Best, Plymouth; W. Cleghorn, 131, Brompton-road; S. E. Snell, 51, Pimlico-road; A. Stebbing, 2, Madeira-road.

SILVER CHORD MINING AND SMELTING COMPANY (Limited).—Capital 100,000l., in shares of 1l. To purchase, work, and develop certain mines situate in Colorado, and any other lands, mines, mineral properties, rights and interests in that State, or elsewhere in the United States of America. To deal in, sell, and dispose of ores and minerals, and generally to carry on the business of a mining, smelting, trading, and metallurgical company in all branches. The subscribers (who take one share each) are—A. Harvey, Tottenham, manager; J. Hagliff, Islington, agent; W. J. Twentyman, 264, Amherst-road, accountant; A. Clegg, East Dulwich, book-keeper; J. H. Smith, Kennington, time-keeper; T. Williamson, Islington, accountant; W. J. Thomas, 81, Mildmay Park, correspondent. The directors must not number more than seven or less than four. The subscribers, until the directors are appointed shall act as such.

THE PROVIDENT INDUSTRIAL SOCIETY (Limited).—Capital 25,000l., in shares of 1l. The usual business of a provident insurance society. The subscribers (who take one share each) are—J. Treharne, 14, London-street; F. Lycett, 29, Great St. Helens; F. G. Trehane, 14, London-street; R. Thompson, Leytonstone; R. M. Topwith, Tottenham; W. B. Halls, 33, Skidmore-street; R. C. Sydney, 6, Grocers' Hall-court.

THE UNITED CANAL COAL, LIME, AND BUILDING MATERIALS COMPANY (Limited).—Capital 10,000l., in shares of 5l. To acquire and continue the business of the United Coal Company (Limited) at Gravesend. The subscribers (who take one share each) are—J. Burgess, Gravesend; B. Hooker, Gravesend; D. Colborn, Gravesend; W. Freeman, Gravesend; J. Jones, Gravesend; J. Turner, Gravesend; H. Stephens, Gravesend.

THE LANCASHIRE AND YORKSHIRE ELECTRIC LIGHTING COMPANY (Limited).—Capital 100,000l., in shares of 5l. The business of electricians, mechanical and chemical engineers in all branches. The subscribers (who take one share each) are—J. Hargreaves, Manchester; T. Richardson, Manchester; R. Smith, Chester; H. S. Gibbs, Chester; L. P. Rees, Manchester; J. Withan, Southport; E. Everitt, 11, Alfred-place West.

THE HASTINGS PATENT HYDRAULIC FREESTONE COMPANY (Limited).—Capital 20,000l., in shares of 5l. To acquire and carry on in that town an artificial stone manufacturing business. The subscribers are—A. W. Harrison, Hastings, 20; G. E. Arnold, Hastings, 20; H. S. Marriott, 20; W. T. Trollope, Hastings, 20; W. M. Simpson, Hastings, 5; A. W. Arnold, Hastings, 5; H. G. Shorter, Hastings, 1.

THE WOLVERTON AND STONY STRATFORD TRAMWAYS COMPANY (Limited).—Capital 20,000l., in shares of 1l. To construct, maintain, and work a tramway in Buckinghamshire. The subscribers are—A. Culverhouse, Wolverton, 50; J. G. Johnson, Wolverton, 50; C. Aveline, Wolverton, 50; E. Hay, Stony Stratford, 50; J. Canon, Stony Stratford, 10; J. Pacey, Stony Stratford; W. Covington, Wolverton, 1; H. Aldred, Wolverton, 50.

THE NEW VAN CONSOLS AND GLYN MINING COMPANY (Limited).—Capital 80,000l., in shares of 1l. To acquire by purchase the leasehold interest of the United Van Consols and Glyn Lead and Barytes Mining Company (Limited) in the mines worked by them, along with the plant, machinery, stores, tools, and other property. To work the said or any other mines for the production of lead, zinc, copper, barytes, or any other ores, minerals, or metallic substances for the purpose of sale, and generally to carry on all operations connected with a mining and smelting company. The subscribers (who take one share each) are—P. Jones, Newtown, merchant; J. Cooper, 9, Coleman-street Buildings, accountant; J.

THE CHEMICAL MANURE COMPANY (Limited).—Capital 50,000*l.*, in shares of 10*l.* The business of manufacturers and dealers in chemical manures and all articles incidental thereto. The subscribers (who take one share each) are—T. W. Hines, Peckham; G. Hasegrove, Brockley; T. Weathall, Walthamstow; J. A. Ferris, 30, Calthorpe-street; F. W. Eustace, Victoria Park; W. E. Rawley, Bow-road; W. J. Rawley, Bow-road.

UNITED MEXICAN MINING COMPANY.

The SECRETARY read the dispatch, as follows:—
 Advices from Mr. Hay, dated Guanajuato, Oct. 6 : Mine of San Cayetano de
 Ovejuna; We have sunk in the winze of San Lazaro in two weeks to Sept, 30

THE WENTWORTH GOLD MINING AND INDIAN ESTATES
COMPANY.

Mr. BLADON said, he had been very much pleased with the statement of the Chairman. He did not think the estimates with regard to the return from clinchona were at all sanguine.

On the motion of Mr. HARKER a vote of thanks was passed to the Chairman and directors, and the meeting broke up.

Belt Copper Mines.

a return of from 30 to 40 per cent. If the results are not such as I expect them to be it will be for want of energy in some department, but if the directors con-

to assist morally the efforts of Mr. Brand in laying out the works, within six months I believe you will have a dividend-paying mine second to but one in the Lake Superior district—the first being the Calumet and Hecla. Their shares were at \$25 some time ago, but now they were as high as \$240. I cannot help congratulating you, gentlemen, in having become possessed of so fine a property. I have seen mining carried on from the northernmost parts of Nova Scotia to Nevada and California; but if I had some thousands to invest I would rather invest them in the copper regions of Lake Superior than in the districts which I have just spoken of. (Cheers.)

Some rich specimens of native copper and other deposits taken from the property were exhibited and inspected by the shareholders.

Col. HARR proposed a vote of thanks to the Chairman and directors, and Mr. Wolsley, specially, and congratulated his fellow shareholders on the acquisition of so valuable a property. Mr. CLARK seconded the proposition, which was carried unanimously.

The CHAIRMAN, in returning thanks, remarked that Mr. Wolsley had accomplished an immense amount of work in a very short time. In three weeks he had been down six miles, and the directors had received private information that he had examined everything most minutely. Mr. Wolsley would be back in England in about six weeks' time, when the directors would be put in possession of a quantity of minute evidence which would be of immense assistance to them.

On the motion of Col. FRED CAMPBELL, seconded by Mr. R. CUNNINGHAM, a vote of thanks was passed to Mr. COXON. The proceedings then closed.

WHEEL PEEVOR MINING COMPANY.

The ordinary general meeting of shareholders was held at the mine, on Thursday, Mr. THOMAS PRYOR (purser) in the chair.

The usual preliminaries having been disposed of, the statement of accounts was submitted, showing that the total cost was 50697, and the total credit, including 50 tons of tin sold for 29317, were 30937, leaving a loss on the four months' working of 18757, and a total debit balance of 23907. The report of Capt. W. T. White and T. C. King, the agents, was also submitted. It stated that they had again set their engine-shaft to sink below the 100 fm. level by a full pair of men, at 454, a fathom. It was intended to push this on as fast as possible, in order to obtain, if possible, more satisfactory results at the 110 than they had at the 100. This 100 fm. level was driven west of cross-cut on the flat lode 5 fms, and the lode appeared to improve in character and appearance. They believed that would be the case throughout—or at least until it formed a junction with the main tin lode—which they calculated would be in about 20 fms. further drive. This was a most important point, and they looked upon it as one that would place them in a far better position than they now were. They had driven the 90 fm. west of cross-cut, 7 fms, and cut the slide; for this distance the lode was worked in 127, a fathom. They hoped, in 2 fms. drive, to get through the slide, and to find the lode as productive as it was. The cross-cut, driving north to the middle lode at the 90, was being forced on with all speed, and was already in 5 fms. They expected to cut the lode in about 14 fms. more. This lode had proved productive from slide to boundary at the 80 fm. level, and they had every reason to expect the same at the 90. When this ground was properly laid open they hoped again to increase their returns. They were sorry that they could not meet the shareholders with better results that day, but as could be seen by the report, they had several points which they considered that, when reached, would again enable them to increase their returns, and considerably improve their position.

The CHAIRMAN said it was 5½ years since the last call was made prior to that day, and in the interval they had had a succession of dividends at their meetings. But when in former years losses were made they went on the principle of making calls to meet them, and he believed they had acted wisely to follow the rule that day. Such were the prospects of the mine that he believed that in a month or two they would be in a much better position. It was 5½ years since they began to pay dividends there, and in that time they had divided 25,025, or 8s. 13s. 6d. per share.

Capt. WHITE regretted as much as the Chairman that a call was necessary, but he assured them that if ever they had bright prospects in Wheel Peavor they had them still. Certainly the mine could not have looked worse than it did when he undertook the management, and their position was much better now. They had three or four points to look forward to that he thought would turn out by-and-by remunerative to them. These points were at the 100 fm. level, and in the 90 west on the south lode, and on the tin lode west of the slide, which he was pleased to say was cut on Wednesday. This slide they calculated would be 2 fms. thick, and west of the slide at the 80 the lode was highly productive. The side lode was gone down to the bottom at the 80, and he could see no reason why they should not anticipate seeing as good a lode at the 90 as the 80. As to the 80 west of the same slide, on the middle lode, they had driven the end to the boundary, and for the whole of the distance from the 70 the ground had been stopped, and had averaged between 2½ to the ton. These points were encouraging, and the shareholders might rest assured the agents would do their utmost to satisfactorily realize them.

Mr. WICKETT enquired whether it would be wise to drive a cross-cut south at the 100 to ascertain whether the main lode was in that direction.

Captain WHITE remarked that this was a matter they had been discussing ever since they had sunk the shaft to the 100. He certainly thought it would be a good thing to put a cross-cut on the south, as it was quite possible the lode was thrown in that direction, but there were stronger reasons for believing that it was thrown to the north. His reason for believing that the lode was thrown north was that the flat lode at the 80 was 10 ft. wide, and at the 90 it was not more than 2 ft. They were, however, now sinking with all speed, and he recommended that they should continue to do so, for they had been behind hand in this respect for a long time past. In about a month's time, however, they would be in a position to drive the cross-cut south and sink the shaft at the same time. Between the 90 and the 100 there was a junction of the main lode with the flat lode, and his opinion was that the reduced size of the lode was occasioned entirely by the south lode, which he thought would ultimately destroy it altogether, and the south lode would then be found in its regular size and productive character at the 110, as it had been in the levels all speed, and he recommended that they should think they could cut it in 10 fms. driving, or it was possible it might be more. Another great point was that in driving west on the flat lode at the 100 the lode was running something like 28° south of west, and by driving west on this lode the junction of the two dipping in this direction, they would in about 20 fms. drive meet with the main tin lode and the influence of the flat lode, where they had a lode gone down in the 90 worth 20s. per fathom.

Captain KING concurred in the remarks of Captain White, and believed that after a time they would have increased returns.

The report and accounts were then unanimously adopted, and on the proposition of Mr. THOMPSON, seconded by Mr. A. RICHARDS, a call of 10s. per share was made, the proceedings terminating with the usual complimentary vote to the Chairman.

WHEEL CREBOR MINING COMPANY.

The ordinary general meeting was held at the office of the company, Gracechurch-street, yesterday.

Mr. J. Y. WATSON, F.G.S., in the chair.

Mr. C. B. PARRY (the secretary) read the notice convening the meeting. The accounts from July 9 to Oct. 31 showed a balance of receipts over payments of 10227. 10s. 5d., and a balance of assets over liabilities of 28167. 3s. 8d. The profits on the four months' working was 14817. 0s. 3d.

The CHAIRMAN said. The accounts presented to-day show sales of copper ore of 40517. 11s. 7d.; muddle, 1997. 11s.; discount, 27. 11s. 5d.; making total receipts, 42537. 14s., and a profit in the four months' working of 16817. 0s. 3d. Since the last meeting they had paid off every debt on the mine, and come before you to-day without a single liability beyond small ones for dues on ore not yet made up. We have cash in hand 10227. 10s. 5d., and assets over liabilities of 30167. 3s. 8d. At the last meeting it was determined to put by 50s. per month, to meet the 13th month, which went into the accounts once a year, and if we deduct this from the profit it will leave 14817. 0s. 3d., so that a dividend of 2s. 6d. per share can be declared, payable when the ore bills are received, and then bills will be left in hand sufficient to meet the three months' costs that will have to be provided for before the proceeds of another sale of ore will be received. In regard to the state of the mine, the report (which the secretary will read you) shows that the bottom levels are getting into ore, and for the coming four months the agents hope to sample 500 tons of copper ore and 150 tons of muddle. There are one or two things we have now to refer to, and to take the further wishes of the shareholders upon. Some years ago a resolution was unanimously passed that the public inspections of the mine should be limited to one day a fortnight, as the agents complained that indiscriminate and daily inspections interfered too much with the underground workings and the raising of the ore. To this resolution the committee have been compelled to adhere; but since the last meeting a shareholder has demanded an order to inspect on a non-inspecting day, and as the committee declined to give it, the secretary will inform you that he has since had rather an unpleasant time of it; and the said shareholder has now demanded to see, whenever he pleases, the share accounts of each shareholder in the mine, and all the transfers as they pass through the office; a thing that no member of the committee has even thought of doing; and it will be for this meeting to decide upon the matter. Should the meeting decide that any shareholder may thus examine the accounts of all his brother shareholders, the committee can raise no objection; but they felt they could not allow such an innovation to take place without the sanction of the shareholders generally. We have heard it said that members of the Stock Exchange and other brokers might feel a disinclination to deal in the shares, or recommend the mine to their clients if they knew that the names and addresses of the latter might be at once copied out for some purposes or another. In regard to the rule passed unanimously by the shareholders limiting the days for inspection, we may add that the secretary has received notice from a solicitor that an application has been made to the Vice-Warden of the Stannaries in Cornwall to rescind it. The essence of the Cost-book System, as we take it, is that the majority shall concur, and that no individual shareholder shall act adversely to the interest of the general body of shareholders. We may, therefore, safely leave our case in the hands of the Vice-Warden. We regret, however, that this discord has arisen; discord that can only tend to injure the property. For my own part, I have been connected with the mine for more than 20 years, and rejoice at its prosperity; for there was a time when it was so poor that calls were difficult to get in. No banker in London would advance a penny to the company; as treasurer, I had to make constant advances to carry on the works, and I may add, without once losing confidence in the mine; and now, when Wheel Crebor stands second to no other mine in Devon or Cornwall in position or prospects, it is much to be regretted that these differences should arise. And as I am a leasee, personally liable for the rents and royalties, and also bound to see that the mine is worked according to the covenants of a very stringent lease, I must

relieve myself of this responsibility if, as shareholders, we cannot go on harmoniously together.

The CHAIRMAN then moved the adoption of the agent's report and statement of accounts.

Mr. SCHOFIELD seconded the motion, which was carried unanimously.

On the motion of the CHAIRMAN, seconded by Mr. ATKY, a dividend of 2s. 6d. per share was declared.

Mr. SCHOFIELD remarked that during the four months they had paid off merchants' bills to the extent of between 7000. and 8000. more than had been incurred in four months.

The SECRETARY read a letter from Mr. F. Clift, solicitor, on behalf of Mr. Burgan, intimating that he had made an application to the Vice Warden of the Stannaries Court to rescind the resolution passed by the shareholders on Nov. 6, 1879, to the effect that the mine should be inspected independently once a fortnight.

The CHAIRMAN remarked that at the time the resolution was passed the matter was fully discussed, and Captain Andrews, the then agent, stated to the meeting how greatly the frequent visits of inspection interfered with the proper working of the mines.

Mr. BURGAN said there were not three mines in the two counties—indeed, he believed there was only one other besides Wheel Crebor—where there was such a prohibition as that imposed by this resolution. He did not know of any other mine, except East Caradon, where such a prohibition existed.

Mr. SCHOFIELD remarked that the same rule was certainly in force at South Caradon and Marke Valley, and he believed at several other mines.

Mr. ORLANDO WISE thought the question was not whether other mines allowed a more frequent inspection of their properties, but whether it was desirable that the resolution already passed by this company should be supported. (Hear, hear.) He was distinctly of opinion that the resolution was a very judicious one, for he could conceive nothing more monstrous than these daily interferences with the men and the managers, more especially as such inspections were not undertaken to benefit the mine or the shareholders at large, whose interest was that the work should be prosecuted fairly and diligently. (Hear, hear.) That could not be done if the managers and the men were continually being interfered with. He strongly supported the resolution which had been passed unanimously after a great deal of discussion.

The resolution was objected to by Mr. CLIFT and Mr. BURGAN.

The CHAIRMAN moved that the application to rescind the resolution should be opposed.—Mr. SCHOFIELD seconded the motion.

To this Mr. BURGAN moved an amendment that the resolution of Nov. 6, 1879, should be rescinded.—The amendment was seconded by Mr. CLIFT, and, on being put to the meeting, the amendment was carried.

A cordial vote of thanks to the Chairman closed the meeting.

INDIAN GOLD MINES COMPANY.

An extraordinary general meeting of shareholders was held at Glasgow yesterday (Friday).

Mr. J. C. CUNINGHAME in the chair.

The usual preliminaries having been disposed of the report of the directors was submitted, and stated that in order to develop the mines more funds would be required. The results hitherto had not been so favourable as the directors had anticipated, but it was thought that matters would now improve. It had now been ascertained that the reefs extended downwards. Mr. Severn, the manager, had informed the directors that he had cut a heavy reef on tunnel road 400 ft. from surface. In a communication dated Sept. 22 Mr. Severn stated that two trials of quartz had been made, one of 7 tons yielding 250 grains troy melted gold, and the other 1½ ton yielding 58 grains. He considered that for a first yield this was not bad, but that the stone was too near the surface. Writing Oct. 2, Mr. Severn said that everything was going on first class, and it was expected that a great stride would be made in work in the forthcoming months.

The CHAIRMAN in moving the adoption of the report read a letter from Sir W. Cuninghame, resigning chairmanship of company simply and solely because of strictures made on management at last general meeting which seemed to him unreasonable, vexatious, and undeserved. The Chairman further said that he was happy to inform the meeting that the Rajah of Nellore had signed the lease which the company had tried to get signed for the last two years. (Applause.) A case of pyrites, supposed to contain a considerable quantity of gold, had been received from India; but he regretted that the result had been rather disappointing, as they found that it did not contain what the directors had been led to expect. He was sorry to say that it would be necessary to make a further call of 2s. 10s. per share on the new shares, payable in two instalments. That money, however, would last nearly a year, even supposing that they got no return from the mines.

Some shareholders proposed that the company's interest in Devala Central Company should be sold, but it was explained that there are difficulties in the way.

The report was adopted, the filling up of the vacancies in the board being left in the hands of the directors.

WEST PRUSSIAN MINING COMPANY.

The ordinary general meeting of shareholders was held at the offices, Westminster Chambers, Victoria-street, on Wednesday.

Mr. BRINSLEY NIXON in the chair.

Mr. EMILE GARCKE (the secretary) read the notice convening the meeting, and the minutes of the preceding meeting, which were confirmed. The report and accounts were taken as read.

The CHAIRMAN said there was very little to be added to the information contained in the reports of the directors and manager; but Mr. Wyndham Wynne, the manager, was present, and would be happy to answer any questions which the shareholders might desire to put on the position and prospects of the company. In their report the directors expressed their regret that the results of the past year's working was unfavourable. The average price received for the lead sold during the year was the lowest the company had experienced. In most of their mines, in Heidelberg especially, the cost of raising the lead was a heavy one, so that the low price of lead affected them very considerably. Moreover, some of the mines had fallen off in productiveness, and they were obliged to seek new sources of produce.

Mr. FYLER asked whether the Heidelberg Mine could be worked at a profit if lead advanced to 12s. a ton.—Mr. WYNNE (the manager) said that since last year the Heidelberg Mine had deteriorated somewhat considerably. They had not yet got into the course of paying ore which they had expected to reach, and it would be necessary to sink deeper and develop the mine more, and at the present price of lead it would scarcely pay to do so. Unless there were a rise in lead and a promise of better prices he would not recommend them to develop the Heidelberg Mine further for the present.

The CHAIRMAN added that Mr. Wyndham Wynne recommended the opening up of some of the other mines of the company.

Mr. WYNNE, in reply to further questions, said it would take from 18 months to two years to bring this new mine into a paying state. It would then give them a profit of, probably, from 4000l. to 5000l. In the meantime, unless lead rose considerably, he did not expect that the ordinary shareholders would receive any dividend, as it was necessary to apply such profits as would be made to the development of other mines of the company.

Mr. WYNNE, in reply to Mr. FYLER, said the Aurora Mine was a good one, and yielding profits even at present low prices.

On the motion of the CHAIRMAN, seconded by Mr. FYLER, the report and accounts were adopted.

The retiring directors—Colonel Charles Wynne and Mr. Brinsley Nixon—were re-elected, and the auditor, Mr. E. Woodington, was re-appointed.

The meeting closed with a vote of thanks to the Chairman and directors.

COOTACOVIL GOLD MINING COMPANY.

The report of the directors prepared for presentation at the meeting to be held on Tuesday states that notwithstanding all the drawbacks occasioned by an extremely heavy monsoon, such as has not occurred within the memory of the oldest resident in Wynaad, the work of opening the mine sufficiently to commence steady operations has been virtually accomplished. Up to Sept. 30 the rain gauge showed a total of 331½ in., and as every inch represents a volume of 100 tons of water per acre, some idea of the difficulty of carrying on any work under such circumstances may be readily imagined. The most serious damage caused by the monsoon was the closing of the middle adit by an extensive landslide, and in the treacherous state of the ground, it was considered advisable to delay re-opening it until the heavy rains were over. According to the latest advice received the reef had again been reached, the adit was being secured, the finishing touches were being given to the machinery, damage to watercourse repaired, and the tramway completed to convey the quartz to the stamp mill.

About 600 or 700 tons of quartz were taken from the reef by the upper and middle adits before the commencement of the monsoon, and this quantity will provide work for half the stamps for about a month, during which the main level will be opened at a depth of 220 ft. from the crown of the ridge, and form the outlet through which all the quartz will eventually be conveyed to the reduction works. Progress, however, somewhat slow, owing to the extent of blasting required. So far as can be estimated, the Cootacovil Mine will be in full work at a cost of 17,000l., to 18,000l., and a very moderate out-turn of gold should, therefore, suffice to pay fair dividends. It is, of course, impossible for them to forecast the precise number of pennyweights per ton obtainable by crushing in bulk, as distinguished from assay tests; but so far as their knowledge is concerned, nothing has occurred to alter the favourable opinion expressed by Mr. Harvey of the value of the reef, and by the end of the month, or early in December, it is hoped his expectations may be fully justified by ascertained results.

The crushing and concentrating arrangements of this company, as designed by Mr. Harvey, differ in some important respects from those of any other company in Wynaad, and although the directors have entire confidence in his judgment in selecting the means of dealing with this particular quartz, they con-

sider it unreasonable to expect the first crushings to yield the maximum results which will probably be obtainable after experience of its peculiarities. No difficulty is apprehended with the pyrites, but before engaging an expensive reduction officer, or deciding on the process to be finally adopted for their treatment, a quantity will be sent to England for the purpose of being tested in different ways. The question of labour has from the outset engaged the serious attention of the directors, and the experience gained, shows that native labour, under proper European guidance, may be safely relied on for mining work; while for boring and blasting, Chinamen have been found very efficient. The available spare land belonging to the company will be planted up with cinchona, of which about 25,000 plants have been put out, and 50,000 seedlings are in the nursery for next season. In this way a reserve fund may be quietly accumulated at a small annual cost.

TINCROFT.—At the meeting on Nov. 2 (Mr. W. Teague in the chair) the accounts showed a loss on the four months' working of 26617. 11s. 10d., and a total debit balance of 43367. 11s. 5d. The Chairman, in reply to an enquiry said that they were very poor at the bottom of the mine, indeed they had no lode there. That was where they came to grief. They had a very large lode almost from the very shallow level down to the 274, and a little below that. That lode had, however, been cut off by an eluvial cone, which came right across it. In the present shaft they had sunk they had suspended the driving of the level at 280, in consequence of having nothing to drive on, so they had stopped all the ground they could. Their only hope in the west part of the mine was their getting down into the same run of ground as they had in Cook's Kitchen. They were not so deep as Cook's Kitchen, the level of which was 20 to 30 fms. up to their boundary. This was the hope they had. He believed the same ground they were now passing through was experienced in Cook's Kitchen. It had always been hoped that Duncan's and Chappel's lodes would unite, and this they had done. There appeared to him to be an incline at the top of the eluvial cone, but they had not seen sufficient to form an opinion as to how wide it was. Had the lode continued at the same value as it was 12 or 18 months ago, instead of there being a loss they would now have a profit. They would be driving but few levels in Tincroft proper. By the aid of boring machinery they could put about 7 fms. a month in each level. This meant that as much work was now being done with boring machinery in one month as could be done in six or seven by hand labour. This caused a little extra cost, but taken altogether it seemed favourable, with the cost of hand labour. But for boring machinery he did not believe the deep hard ground mines of the district could be worked.

MONA CONSOLS.—The report of the directors, prepared for the meeting on Friday next, states that the accounts show an unexpended balance of 1287. 17s. 2d. Capt. Wm. Bowden has been appointed manager in place of Capt. Mitchell, of the Parys Mines, who is, however, retained to report once a month for 12. 1s. Capt. Bowden reports that on his arrival at the mine he found six men sinking a winze by day work. At first opportunity he set it to them at 127. per fathom. After working one week they declined to go on at the price, and the work was stopped for three weeks. It is now being worked by six men and three boys (price not mentioned) who commenced on Nov. 1, and made a discovery the following day. In the west end of the winze there was a lode of about 1½ ft. wide, mixed with rich ore, richer than he had seen before. In the east end of the winze the lode was not quite so big, but nearly as rich; the ore was on the footwall a part of the lode about 18 in., that had not up to that time been ore, but was then spotted with rich ore, making a lode together about 2 or 2½ ft. wide. He is well pleased with its present appearance. Capt. T. Mitchell (Nov. 6) reports that a great deal of work has been done during the past twelve months, and things are now getting into good working order for fairly prosecuting the mine. Several tons of lodestuff (saving work for copper) have been broken out, and the prospects for opening up a good mine are highly favourable.

FOREIGN MINES.

CANADIAN COPPER AND SULPHUR.—Francis Bonnetts, Oct. 27: The 50 east Hartford No. 5 shaft is looking very well. Vein full size; drift about 5 ft.; ores 6 to 7 per cent.; wet assay for copper. This being the most easterly drift from No. 5 shaft, part of the mine gives room for increased confidence in the resources of the mine. There appears to be a little improvement also in the 40, east of No. 5 shaft on the Hartford Mine, as well as in a rise in the back of this 40 fm. level; both of these points are in west ground, untried from surface. There is now much change in the 10 west or east of No. 3 shaft, or in the 35, west of No. 1 shaft. At St. Francis Mine there is no change of importance to report. The smelting works are running well.

CHILE GOLD.—Telegram from manager: Return for September, 1946 oz.; 25 days, 30 stamps.

COLORADO UNITED.—Mr. Ward, Oct. 21: Work in the mine went on as usual during the week. The 12th drift looks good, and shows about 3 in. of ore. The 13th drift, east of Silver Ore shaft, is driven 137 ft., and the present drift show about 2 in. of ore. The stopes are about the same as last reported, and show about 4 in. of good ore. The winze in No. 1 in the bottom of the 12th level is down 23 ft. and looks good; producing 4 in. of ore. In the West Terrible Tunnel we have struck a lode; the size of it I cannot give, as we have not cut through. There is some mineral on the wall. Mill run well during the week. Sent away 69 sack of zinc headings and 154 sacks second-class cobble ore. Heavy fall of snow on the 17th and 18th inst.

DON PEDRO.—Mine Captain, Oct. 5: Explorations: The branches when available present but little alteration to note; we are trying to timber some of the ground to prevent such a fall of overburden, but one failure is small. Level north progressing fairly. In level west 14 sets in and lathed; this is at present idle for want of native hands. The stamps wheel is repaired sufficiently to resume working.—Aqueduct: One length of launder broke down, carriers being very rotten western side of gully, and one, launder eastern side, both repaired as quickly as possible.

—Mine Captain, Oct. 11: There is no change to note here since I last wrote. We have put in three sets today to form another level, or what appears to be a fair lode. Good progress making in the level north, and samples fairly.—Surface: Roof of ore yard covered with tiles.—Adit Level: Some lathing done and four props put in. The repairs here have to be made whilst the wagon is idle, hence men here employed will earn overtime to repair same.

EBERHARDT.—F. Drake, Oct. 14: Drift 1: Total distance run Sept. 30, 5497 ft.; run for two weeks ending Oct. 14, 36 ft.; total distance Oct. 14, 5533 ft.; run for month of October, 36 ft.—Drift No. 2: Total distance run Sept. 30, 276 ft.; run for two weeks ending Oct. 14, 30 ft.; total distance Oct. 14, 306 ft.; run for month of October, 30 ft.—Upraise: Total distance run Sept. 30, 173 ft.; run for two weeks ending Oct. 14, 2 ft.; total distance Oct. 14, 175 ft.; run for month of October, 2 ft.—Drift 2 from upraise: Total distance run Sept. 30, 96 ft.; run for two weeks ending Oct. 14, 14 ft.; total distance Oct. 14, 111 ft.; run for month of October, 14 ft.—Drift No. 2 from upraise: Run for two weeks ending Oct. 14, 24 ft.; total distance Oct. 14, 14 ft.; run for month of October, 14 ft. No material change in our workings this week. On the 18th I shall start hand-drillers into No. 1 drift, south from the 6000 ft. west, and commence an upraise. At the point of starting this week there is in the back of the drift quite a showing of quartz, its value can only be determined by further prospecting.

GOLD HILL.—J. Treloar: The works are progressing satisfactorily, and we shall be ready by the time the castings arrive. Contracts work, sinking shafts, and preparatory work for opening up Randolph have naturally put up our expenditure for September; the working cost this month will be much lower.

HOOPER HILL.—Resident Engineer, Oct. 23: Mine Report for week ending Oct. 21: Fair progress is being made in the Gallimore shaft. In the south-west drift at 139 the vein continues about the same. The Hawkins shaft is being pushed down as rapidly as possible; the ground, however, has become somewhat harder, and progress slightly slower. The vein, which has hitherto been carried down with the shaft, carries a trace of gold; the drift north on the ore cut, in the No. 2 cross-cut from the tunnel, has got into unproductive ground. The men have been put to drive south on the ore. A parcel of ore for a working test will be sent north a few days.

LABELLE.—Lewis Chalmers, Oct. 15: It was my intention to keep the Eschequer Mill running on 3½ tons, while the extension to 10 tons was being proceeded with, but I had to abandon it, not only because the bricklayers could not, on account of the fumes and heat, work over the lower hearth of the O'Hara (already converted into one long reverberator), but because considerable alterations had to be made on the lower hearth to enable us to make the most of the upper hearth, and a third which I am putting above the original two. So long as are used only the lower hearth, one discharging and cooling chamber on the end was sufficient for 3½ to 3½ tons in 24 hours; but having now to divide the furnace into four furnaces, each with three hearths on the top of each other (two oxidising and one cloridising hearth), I had to undermine the lower hearth to provide the means of discharging below. I had also to have a cooling floor for increased output of red-hot ore, which necessitated the extension of the whole building on the west side laterally 16 ft. by 79 ft. This extension is all completed except a portion of the shingling on the roof, which the severe snow storm has rendered impossible. To-day, however, I take advantage of a lull in the snow from the roof boards, and have four men shingling, who should, if not stopped by a fresh fall, finish to-morrow. The present furnace-house, with the extension for cooling-floor, is bounded on the side of that extension by a steep embankment, and on the opposite side by the wagon-road, and between the wagon-road and the present furnace is a good deal of ground to grade to get any addition on that side for additional furnaces. We are now erecting four new furnaces, of which I am completing three. We expect to roast from 15 to 18 tons in 24 hours with these four furnaces, and I think I can divide the front to get what more furnaces may be necessary to roast 20 tons in 24 hours. In summer we can calcine outside at the mine; in winter it is impossible. Winter is already on us, but I am in hopes that the late unusually early snow-storm may give us two months of fair weather. It is hard to say, however, in weather like this when I shall be ready to run on 10 tons, but I am pushing things as hard as I can. No stoppage of any duration will be required when in spring you continue the extension of the Eschequer Mill. There are no maps in existence. So soon as I can find time I will prepare a map of our working plan of the mine. What I have now (being all we require for present work) would not convey to you the information you require. We have still a quantity of ore in sight above the tunnel level, but as to its extent it is impossible to say until we pick it out. With regard to the clay and quartz in the west drift allow me to refer you to Mr. Jones's report of July 17.—Before that can be utilised we must have stamping or crushing appliances and concentrators at, or near the mine, as, although it will pay to haul the concentrates (worth from \$6 to \$8 in silver, with gold and copper in small quantities). That, however, is a reserve, and a valuable one, which will come into play some day. The alterations I am making on the mill now are the furnaces, of which I send you plan, and agitators, tubs and vats sufficient to treat 10 tons of ore a day. You may confidently rely on my not spending one cent unnecessarily. So soon as I have this mill running on 10 tons I propose, without stopping, to increase its capacity to 20 tons.

ROBINSON AND DONALDSON CONSOLIDATED.—Superintendent, Oct. 21: No. 1 level in 284½ ft., yielding 1 ton of milling ore per fathom. No. 1 winze down 16 ft., yielding 1½ ton of milling ore per fathom. Started to communicate with No. 2 rise; lode 2½ ft. wide. No. 2 level in 377½ ft.; lode 4 in. wide, yielding ¾ ton of smelting ore of good quality. No. 3 level in 145½ ft., yielding 1½ ton of smelting and 3 tons of concentrating ore per fathom; lode

42, POULTRY, LONDON, E.C.

Mining Correspondence.

BRITISH MINES.

BEDFORD UNITED.—H. Trezise, Nov. 7: There is no change on the north side since last report. McCallan's Shaft Bridge Lode: The engine-shaft is sunk 6 fms. below the 42, in which the lode is 6 ft. wide, of a promising character; composed of pease, capel, mundie, and black and yellow ore. The lode in the 42 west is improved in appearance, carrying a nice rib of yellow ore of excellent quality. The same level east is looking more promising for an improvement. The lode in the 30 east is very promising. The winze sinking below the 30 is not so good for ore, but promising for further improvement. The stope is of much the same value. The 20 east is without change. The work of the mine is progressing satisfactorily.

BLUE HILLS.—S. Bennetts, R. Harris, Nov. 8: The Pink lode, in the winze below the 50, near the east end, is just as last reported—worth 20¢, to 25¢, per fathom. The Balduin lode, in the Blue Burrow shaft, is producing low quality tin stuff, but not of much value. The 40 east end is in a kind of disordered ground, and the lode is not of much value. The 30 east end is worth 6¢, per fathom.

BRADA (Isle of Man).—R. Rowe, Nov. 1: The different points of the mine continue to open out very well. The 40 end and the 54 end (Prior's lode) are both steadily opening out good copper ground for stope in a lode from 5 to 6 ft. wide. The Bulwark cross-cut at the 54 (Prior's) is still in paying lead ground; we have driven 4 ft. through it, and it continues going ahead; the width of lode already driven through is 30 ft. I am unable to say to-night what day we can start the machinery, the weather is principally delaying us.

BWLOH UNITED.—W. Northey, Nov. 8: Saturday last being our monthly setting-day the following bargains were re-set:—The 100 west to drive, by four men, at 6¢, 10¢, per fathom. For the past few days the lode has greatly improved in size and character, now being fully 2 ft. wide, composed of kilias, quartz, blende, and carrying a small branch of silver-lead ore of a most promising feature for further improvement. The cross-cut north at the 50, towards the new lode, to be driven by four men, at 7¢, 10¢, per fathom; the men to clear their own stuff. No change calling for a remark has taken place at this point, the ground being hard for driving. The 12 east under adit to be driven, by four men, at 4¢, 15¢, per fathom; the lode is from 1½ to 2 ft. wide, composed of light blue kilias, quartz, blende, and occasionally patches of lead ore, and letting out water freely. The stope in the back of the 30—No. 1, to two men, at 2¢, 15¢, per fathom; the lode will yield about 10 cwt. of silver-lead ore per fathom. Nos. 2 and 3, to 12 men, at 3¢, per fathom; their average produce is about 18 cwt. of silver-lead ore per fathom. To stope and rise in the back of the 15, under adit, on Marvin's lode, to four men, at 3¢, per fathom; the lode will yield from 10 to 12 cwt. of silver-lead ore per fathom. All the machinery throughout the mine is good order, and working well. Drawing and dressing are kept going in a spirited manner.

CARNARVON COPPER.—J. Roberts, W. Danby, Nov. 7: In the 56 (Garnon's) there is much more spate showing throughout the cut, with small patches of copper. We have set a tribute pitch in this level at 4¢, 5¢, per ton of ore, worth 15¢. All other pitches are much the same value as reported last week. The continual wet weather is much against our surface work.

CARN CAMBORNE.—W. Vivian, Nov. 9: I beg to report as follows:—In the 95, west of sump on the south lode, the lode is not so large as it has been, being now 13 ft. wide, but its composition and appearance are much as they have been, and show good indications of copper as we get nearer to the cross-course. In the 70 cross-cut, north-west of engine-shaft, the rock is letting down a little water, which induces me to think that the lode is not far off. In the 40, west of engine-shaft on the north lode, the lode is 3 ft. wide, yielding good stones of yellow copper ore, and looks likely to improve.

CATHEDRAL CONSOLS.—Stephen Davey, Stephen Davey, jun., Nov. 9: No change worthy of note in the shaft or ends since our last report. Lavry's Shaft: The great increase of water from the continuous floods have necessitated our detaching the rods and allowing the water to run out the adit for the time being.

CARNARVONSHIRE GREAT CONSOLS.—W. H. Borlase, November 9: Caunter Lode: In cross-cutting the lode at the 24 fathom level, west of Endeavour's cross-cut, we have cut two branches of lead on the hanging and one of the footwall, which will produce 1 ton of ore per fathom. Judging from the present bearing of the branches on the hanging side by continuing the end on the course of the lode, we shall have them in the next 4 ft. The cross-cut in the footwall side is letting out a deal of water. The winze sinking below the 14 fathom level east is for the length of winze 8 ft., producing 1 ton of ore per fathom. The lode in the 14 fathom level east has not been taken down since last report. No. 1 stope in the bottom of adit, east of Big Pass, is producing 1 ton of ore per fathom; No. 2 stope is suspended for the present. A stope west of No. 3 winze in the bottom of adit, producing 1½ ton of ore per fathom. We have cleared and secured the run, and No. 2 winze, and resumed stope. The stope east of winze is producing 30 cwt. of lead per fathom. Stope west of winze is poor in the bottom, and the men are now preparing to take a fresh stope from the bottom of adit, which will soon be in a good lode. There is no change to notice in the winze sinking below the 14 fathom level west of Endeavour's shaft.—East and West Lode: Diagonal Shaft: We are not making the progress in sinking as heretofore in consequence of the water, but the forming a junction with the east and west lode in the bottom of shaft, and the spate accompanying the lode is troublesome for sinking in. The productive qualities of the east and west lode is just the same as for some time past. The lode in the 14 fathom level west is producing about 10 cwt. of lead per fathom. The stope in the back of the 8 fathom level west of shaft 20 cwt. of lead per fathom. The weather is and has been very severe, retarding out-door work very much.

CWM DRYFOR (Brynnarion Mine).—J. Davis, Nov. 5: Joseph's Level: The ground continues to get lighter, and there is a great deal more water rushing out from the end. We have a few spots of lead in the lode. I would like greatly to cut something good in this level.

DERESBY MOUNTAIN.—J. Roberts, W. Sandoe, Nov. 8: As we have previously advised you the No. 5 stope and rise are flooded with water, owing to an extraordinary flood on Sunday. We are working regularly, and the water is drained from 6 to 7 yards below the No. 5, and we hope that the rise and stope men will resume work early next week. The rise is now fairly up to the No. 5 proper, and the lode continues to maintain its value, as we have been reporting it through the month. The cross-cut is now extended close on the rise, and we expect in a week or two to get a communication. The lode here is looking very encouraging. We have had good branches and patches of lead for the last fathom or two, and it seems to be improving as we get nearer the rise. The stope is about the same in value as we reported last week and through the month.

DEVON PRENSHIP.—F. R. W. Daw, Wm. Gill, Nov. 9: We are pleased to inform you that our underground operations are progressing satisfactorily, and the mines looking well.—Surface operations: The greater part of the winding machine is on the mine; we have commenced to erect it, and we shall use all energy to get it in working order. We have nearly finished taking out the foundations for the self-acting jiggers, and shall commence to erect the shed next week.

DEVON GREAT CONSOLS.—Isaac Richards, Nov. 9: There is no important alteration at any of the points of operation throughout the mine since last advice. The six-monthly report is being prepared, and will be forwarded to-morrow.

DRAKEWALLS UNITED.—M. Bawden, Nov. 9: There is nothing new to report in any of the underground operations. Saturday next being our setting-day a full report will be sent next week.

EAST BLUE HILLS.—S. Bennetts, W. K. Mitchell, Nov. 8: The lode in the adit east end is 1½ ft. wide, but is not quite so tiny as it was a week since. Notwithstanding, it is a most promising looking lode, much more so than in the 40 nearly over this ground. The cross-cut in this level and in the level over, are worth on an average about 6¢, per fathom. The new surface work on the stamps floors has been very much hindered during the past week, owing to the frequent heavy rains, and consequently the progress made has not been so great as we desire.

EAST CARADON.—Wm. George, Nov. 9: There is no particular alteration in the character of the lode or ground at the 150 east on caunter, since last reported on. In the 130 cross-cut south the ground has considerably improved for driving, and during the past week we have intersected two branches of lode—one from 6 in. to 8 in., and the other about 4 in. wide—each containing good quality copper ore, with mundie and quartz; these are from 12 in. to 15 in. apart, and are of a most favourable character, and would at once be driven on did we not believe the lode that has recently been so productive in South Caradon is still further south. We shall, therefore, continue to cross-cut in that direction with the hope of soon meeting with it.—Child's Lode: The stope in the bottom of the 100 west is yielding 1 ton of ore per fathom. In the 90, driving west, the lode is 2½ ft. wide, and worth 1½ ton of ore per fathom. This is opening up profitable ground. No other change to notice.

EAST CHIVERTON.—R. Southey, Nov. 9: Good progress is being made in rise in back of the 100. The air being very bad in the bottom level I at once put on more men to sink in the bottom of the 90 to communicate with the rise. I hope to hole this piece of ground in the ensuing week, when we shall have good ventilation throughout the bottom part of the mine. The 100 is being driven by six men, at 4¢, 15¢, per fathom, the lode being large, and indicating that we are getting near the rich lode going down in the 90, being, indeed, a very important point. The engineers and masons are getting on as fast as they can with the erection of the new steam-whim, but the weather has been very much against them. All other points remain without alteration.

EAST ROMAN GRAVELS.—Arthur Waters, Nov. 9: The 109 south is yielding good stones of lead ore and good saving stuff for blende. The 97 south shows two well-defined walls, the lode being charged with calcspar and clay-slate, but without sufficient ore value at present. We expect to see the east part of the lode to come into present drive shortly, when an improvement may be looked for. The stope in the 88, north of new winze, is worth 12 cwt. of lead ore per fathom. The stope in the 97, south of said winze, is worth 12 cwt. per fathom. We are squaring down the No. 2 winze, 86 to 97 south, and hope shortly to have some fair stopeing ground here. There will be 20 tons of blende ready for sampling shortly.

EAST UNX.—W. Hooper, Nov. 9: Lode in engine-shaft sinking below the 82 3 ft. wide, intermixed with mundie and copper ore, of a promising-looking lode. Lode in the 82 west on Davis's lode 2 ft. wide, composed of quartz and peach, intermixed with mundie and copper ore. No. 2 stope in the back of the 82 on Davis's lode is worth 2 tons of copper ore per fathom. No. 2 and 3 stope in the back of the 82 on Davis's lode are each worth 1½ tons of copper ore per fathom. The lode in the 40 west, on the Great Flat lode, is producing low quality tin stuff. The lode in the 10 east of whin shaft, on Whitford's lode, is 3 ft. wide, producing tin throughout.

GAWTON.—George Rowe, George Rowe, jun., Nov. 4: The lode in the 117 east is showing a very kindly appearance, producing 20 tons of mundie and copper ore per fathom. The lode in the stope, east of winze, in the back of the 117, is worth 15 tons of mundie and copper ore per fathom. The lode in the No. 2 stope, in the back of the same level (117) is worth 10 tons of mundie and ore per fathom; and the lode in the No. 3 stope, in the back of the same level, is worth 12 tons of copper ore per fathom. The lode in the 105 in. level end, on the south part, is producing good stones of mundie and ore. The lode in the rise going up above the 115 is worth 12 tons of mundie per fathom. The lode in the No. 1 and 2 stope in the back of the 70, east of cross-cut, is yielding on an average 12 tons of mundie per fathom. All the other points are without change.

GLASGOW CARADON CONSOLS.—Wm. Taylor, Wm. J. Taylor, Nov. 7: South Lode: The 114 east lode still unsettled, but ground getting more favourable, and we hope the lode will soon improve. The west producing stones of ore, but not much to value. The stope in the back of the lode is worth 10¢, per fathom, respectively. Harvey's Lode: The 114 west now worth 15¢, per fathom. There is a small horse in the lode, but this we expect will soon wear out and lode improve. The 114 east improving as it leaves the cross-course, now worth 5¢, per fathom. The 102 west, lode still split and poor. We have suspended the winze in the bottom of this level which is down nearly as deep as the 114; good ground and lode throughout the whole winzing, and when the 114 west is driven and communicated we shall have cut out a good piece of ore ground for stopeing; this we are pushing on as fast as possible. We have three stope in the back of this level (the 102), worth 8¢, 8¢, and 12¢, per fathom respectively. The 90 west is worth 6¢, per fathom; ground favourable. The 90 west, on Harvey's north lode, is worth 6¢, per fathom; this end appears to be just taking the run of ore in the stope above this level, which are now valued at 5¢, and 15¢, per fathom. There is not much change to notice in the tribute pitches, which are turning out about their usual quantities of ore.

GREAT LAXEY.—W. H. Rowe, Nov. 7: Until the driving is a short distance from the Welsh shaft we have put the shaftmen temporarily to the starting of the 253 south, working night and day; but these will be replaced by a separate staff of men as soon as practicable, and the shaftmen will resume sinking. It is satisfactory to have come up with ore in the 253 end north, where the part of lode carried in driving is worth 14¢, per fathom. The 247 end north is worth 11¢, per fathom, and when holed to the 235 winze it will be necessary to commence sinking another for ventilation and opening the ground in advance of the 253 end. A stope in the roof of the 247 end is worth 20¢, and a joint driving and stope below the 235, 55¢, per fathom. There is no change in the 235 end north. The winze sinking in the 220 beyond the 235 is worth 15¢, per fathom. The other workings in the deep mine have very little changed of late.—Dumbells: The lode in the 230 end north is again cut off by a slide, and evidently thrown to the west, on which side we are now directing the end by a gradual course. No. 1 stope is at present in a comparatively poor knot of ground, but more valuable ore is close at hand, and No. 2 stope is worth 25¢, per fathom. As is generally the case after being very good, the lode in the 215 end north has just now become contracted, the present value being 20¢, per fathom. The five stope in the 215 end north, the present value of the 221, 50¢, 32¢, 10¢, and 20¢, per fathom. The 200 end north is worth 20¢, per fathom, which, however, we are obliged to suspend for a limited time in order to sink a winze to the 215, and shall have to use artificial means of ventilation until holed. A stope in the roof of the 200 is worth 30¢, per fathom. The one in the sole of the 110 north is worked nearly to poor ground, but the other below the 85 will soon be in ground valued at from 60¢ to 80¢, per fathom. The lode in the 60 end north, after passing through the slide, has split into two divisions, which will probably unite again in a short distance, meantime both branches contained little ore, but not yet of much value. There is nothing new to report of the other levels in this direction.

GREAT WEST CHIVERTON.—John Curtis, Nov. 9: Watson's engine-shaft is 6 fms. below the adit level; lode, 3 ft. wide, with stones of mundie and good stones of lead in it. The engine is working very well, and consuming about 5 cwt. of coals in 12 hours.

GREEN HURTH.—J. Polglase, Nov. 2: The 44 end north continues to yield 6 tons per fathom, the south end about 2 tons of ore per fathom. The stope in the bottom of Standage level is worth 5 tons per fathom. The stope in the back of Standage level is worth 2 tons of ore per fathom. This ground is nearly worked out for the present. It will take probably another month to fill the stope in the back of the 30. The stope in west branch is producing about 12 cwt. per fathom in the back of the 30. No. 4 vein is without change. The cross-cut east from Standage level is at present in hard ground. The heavy rains during the week have hindered our surface operations.

HERODSFOOT.—R. H. Vivian, Nov. 9: We have nearly finished the embankment for the road, and dressing floors, &c. The weather continues very wet; we are taking advantage of this by storing as much water as possible. All the reservoirs are filling very fast. No change in the mine. We hope to have the water out to bottom in a day or two.

HEALEFIELD.—J. Trelease, Nov. 3: Since I last communicated to you we have sampled 27 tons of ore. There is no change worthy of notice in the cross-cut above the main level. In the east cross-cut at the Success level, we have intersected hard sill, intermixed with quartz, heavy spar, and small strings of lead ore, but not sufficient to value. The stope is still working on tribute at 48s. a bing, worth 15 cwt. of lead per fathom. Tribute bargain in fore-most sump, by four men, at 40s. a bing, worth 14 cwt. per fathom. Collin's pitch, in bottom of Horse level, on main lode, by three men, worth 10 cwt. of lead per fathom. Foster's pitch at the middle level, on strings, by four men, at 45s. a bing, worth 15 cwt. of ore per fathom. Stoker's pitch is worth 11 cwt. per fathom, working at 48s. a bing. The end on the main lode at the Success level has a very kindly appearance, the lode seems to be unsettled, but I hope within a few fathoms to be improved, and will be forward to-morrow. The ground in the 20 cross-cut north has improved, and good progress is now being made towards No. 2 lode. In the 20 cross-cut we are driving through mineralised ground; this is an indication of the lode being near. The 20 west on No. 1 lode is producing good tin stuff, and improving as we advance.

HERODSFOOT.—P. Tenby, Nov. 8: In going through the mine yesterday, I carefully examined every point in operation, and am pleased to be able to report I never saw it looking better upon the whole. The lode in the winze below the 205, south of shaft, has greatly improved, and is worth fully 25 cwt. of ore per fathom (which was reported to be 15 to 18). The lode in the 120, north of shaft, continues as good as when last reported; no signs of any falling off. I have, therefore, very just ground for believing that we are into another of the rich deposits of ore for which Herodsfoot has been notorious. The next level, the 175, which is being rapidly cleared, to enable us to extend the drive into the body of rich ore, will not be long before enabling us to prove it. I consider that almost every point has improved since my last. Will send a full report next week, also some stones of ore from the 205 south, to the office for shareholders to examine. The lode in the 120, north of shaft, is now producing 15 cwt. of ore per fathom.

HLINGSTON DOWN.—Thomas Richards, Nov. 8: The engine-shaft is down below the 25 13 fms. 4 ft. 9 in.; 3 ft. have been sunk during the past week by nine men; the ground continues favourable, and good progress is being made. The 25 east by six men has been driven 2 ft. 6 in.; total distance from the shaft 30 fms. 3 ft. 9 in. The lode is without material change, being composed of capel, quartz, mundie, &c., and a little rich copper ore. The cross-cut at the 25, east of the shaft, towards the No. 2 lode, by four men, has been extended 3 ft. 2 in. and full progress continues to be made. The 12 east by four men, has been driven 2 ft. 8 in.; total distance from the shaft 50 fms. 3 ft. 4 in. The lode has much the same appearance, containing capel, quartz, peach, priam, mundie, &c., and in places a little rich copper ore. The deep adit cross-cut, by four men, has been extended 3 ft. 3 in.; total distance from No. 2 lode, 30 fms. 3 ft. 6 in.

KIT HILL.—Isaac Richards, Nov. 9: The lode in the winze in the bottom of the 62 fms. level west of the north shaft is now valued worth 12¢, per fathom. The six-monthly report is being prepared, and will be forwarded to-morrow.

LANGLIFF.—R. Goldworthy, Nov. 8: I am pleased to inform you sufficient ground has been cut in the bottom of the down-draught shaft for the cistern, which is now in its place. Wind-bore H-piece and pole-case fixed, and hope to have them all working in the early part of the coming week.

LOVELL (THE).—J. Frisk, Nov. 4: We are making good progress in sinking the engine-shaft below the 20. The flat rods from the water-wheel are working remarkably well; this will effect a saving of at least 30¢, per month. The ground in the 20 cross-cut north has improved, and good progress is now being made towards No. 2 lode. In the 20 cross-cut we are driving through mineralised ground; this is an indication of the lode being near. The 20 west on No. 1 lode is producing good tin stuff, and improving as we advance.

MELLANEAR.—S. Harris, W. R. Toms, Nov. 8: The ground in the 30 cross-cut, driving south of Gundry's shaft, continues very promising in appearance, and easier for driving. The 70 cross-cut, north of main lode, east of Gundry's shaft, is without alteration, being about the same as for some time past. In the 60, driving east, the lode is 4½ ft. wide, yielding 2 tons of ore per fathom, and the ground is favourable for driving. In the 110, driving east of shaft, on main lode, the lode is 4½ ft. wide, yielding 2 tons of ore per fathom, and is improving in character and value. The lode in the 110, driving west of shaft, on south part, is 5 ft. wide, and yielding 2 tons of ore per fathom, and is of a promising character. The part of the lode carrying in the 120, driving east of shaft, on main lode, is 5 ft. wide; the ground still continues hard and spare for driving, but judging from the level above it ought very soon to improve. The 80, driving west of shaft, on main lode, is 5 ft. wide, yielding 2 tons of ore per fathom, and the ground is favourable for driving. The lode is 5 ft. wide, and yielding 2 tons of ore per fathom in the winze in the bottom of the 100, east of the shaft. In the 100, driving west of the shaft, on main lode, the lode is 5 ft. wide, and yielding 1 ton of ore per fathom; we expect an improvement here soon, as we have a winze sinking about 14 fms. in advance of this level in the 120, yielding 4 tons of ore per fathom. The lode in the rise in back of the 120, at Gundry's shaft, is 5 ft. wide, and yielding 1 ton of ore per fathom. The lode in the 90, driving east, on main lode, is 4 ft. wide, and yielding 2 tons of ore per fathom, but not sufficient to value. In the 110, driving east of the old engine-shaft, the lode is 2½ ft. wide, yielding a little tin. In the 110, driving west of same, the lode is 3 ft. wide, producing spar and peach, with stones of both mundie and copper ore. We also set 11 pitches to 26 men at an average tribute of 3s. 6d. in 14.

MID-DEVON COPPER.—James Neill, Nov. 4: In a shaft the influx of water continues to increase caused by continuous rain, four revolutions of wheel per minute (which was to cope with it). Machinery doing ad duty. Water in fork to 80.—C Shaft: Stope in back of 45 east, worked by eight men and two boys. I am pleased to report an improvement at this point in the yield of ore discovered in western end. It appears to be a continuation of the large deposit only shifted north by the cross-course previously reported. The stratum surrounding it is full of copper stones, which augurs well for its productiveness, and I believe it will continue to improve. In eastern part of stope I have a part of the men working, which yields little ore, and from its congenial character, stope as it is with copper. I am daily expecting an improvement. Taking the stope throughout, I never saw it more promising for an improvement. In the 50 east, driven by six men 5 ft. 1 in., the stratum has been slightly easier this week, being intermixed with more friable garnet, quartz, hornblende, with a little yellow and black ore occasionally; it resembles the stratum passed through at the 45 for some time previous to reaching the ore ground. I feel confident that we shall meet with the dip shoots of ore at this point when the level is extended and take the line of its dip down to the bottom of the shaft. The 40, driving east, is seriously retarding masonry, when masons can work they make fair progress. Am pushing forward with all work as fast as possible. Air-compressor, reservoir, three rock-drills, air-tubes, &c., have been forwarded, the greater part of which is on the mine.

MOUNTS BAY CONSOLS.—W. Argall, J. James, J. Rowe, and W. H. Argall, Nov. 4: Trebarrah: We have reset the draining of the 50 cross-cut south to two men, at 10¢, per fathom. The ground is of an aluvial character, with branches of spar containing apatite of copper and mundie; and within the last week we have had more water. These together augur well for cutting the lode good ahead of us, and which may be cut any day. Our tribute pitches have improved in the back of the 62. We have reset at 9s. 6d. in 14; the lode is worth fully 8¢, per fathom, and the bottom of the same level has been reset at 10s. in 14; lode worth 8¢, per fathom. We have about 15 tons of good quality copper ore dressed, and continuing on the dressing as fast as possible.—Sydney Cove: The shaftmen have completed the fixing of the bearings, and the cistern will be in its place to-day, and in the coming week we hope to drop the pitwork, &c., below the 30 and again commence to clear the engine-shaft. We are sinking a winze from the 20 to 30 east of shaft on south lode, so as to ventilate to the level below and open up tribute ground. We have one tribute pitch working on this lode at 13s. 4d. in 14; lode worth 3¢, per fathom. We are also sinking a winze on Brown's lode from the 20 to 30 east, also for ventilation, there is a tribute pitch working in the back of the 20 at 13s. 4d. in 14; lode worth 3¢, per ton. After we get better ventilation and take up the water in the levels we shall be able to set several pitches on these lodes.

NORTH PART: We have set a rise in the back of the deep level on No. 1 lode; the lode is from 2 to 3 ft. wide, worth 5¢, per fathom. This will hole to the shaft below the shallow level, where the lode is valued from 6¢, to 8¢, per fm., and will open up immense tin backs for us. We have set two tribute pitches in this lode west at 13s. 4d. in 14. Both looking very well, and worth 3¢, per fm. each. There are still six men clearing adits on Nos. 1 to 4 lodes, and four men driving a cross-cut north to cut standard and other lodes, which will give us a good back on a long run of tin ground when cut and driven through. The No. 8 lode is worth 2¢, 10¢, per fathom. We have commenced to drive a cross-cut from this lode to the new engine-shaft, and hope in a few days to be under it. This has been set to four men, at 25s. per fathom. We have still tin from some branches in the engine-shaft, and we hope soon to report this is holed to the cross-cut below. Two shafts are being opened on the No. 5 lode. The lode is from 2 to 3 ft. wide, worth 4¢, per fathom. We hope shortly to put off a level and stope from each shaft through this tin ground. The level driving on the No. 7 lode has been set to two men, at 20s. per fathom, worth 2¢, 10¢, per fm. We are dressing a parcel of copper ore, and have more water for our water-stamps, which we hope soon will be working full time. During the past few weeks we have had nearly continuous rain and rough weather, which have been much against our operations; still, we think we have made fair progress both in the erection of the stamping-engine, which is nearly completed, and in the laying out of the dressing-floors, and the steam stamps will be put off to work as early as possible in the coming month.—Development: The only road to success is in uninterrupted progress through this part, and from the large number of lodes, which all contain tin, and the cheapness with which they can be worked, all tends to show we have a large, producing, and profitable tin mine when fully developed.—Pembro: The cross-cut in the 30 south has been reset to nine men, at 4¢, 10s. per fathom, and during the past month this has been driven 6 fms. We have every faith in cutting copper when we get to the No. 2 lode, for the driving is in a congenial stratum, and we find at times green carbonate of copper in the heads or fissures. [We expect to cut the lode in the coming month.]

MOUNT CARBIS.—G. Johns, Nov. 9: There is no particular change to notice since the report to the general meeting. The lode in the 50, both east and west, continues to open out exceedingly well. Other points as last reported.

MYNYDD GORDDU.—Thomas Kemp, Nov. 8: The south part of the lode carried by the 46 end, west of cross-cut, still has, for the width (5 ft.) a very fine appearance, and is at times producing fine stones of silver-lead ore; from the present indications I expect very shortly to have the pleasure of reporting that a discovery of great importance has been made here. This bargain is worked by six men, at 160s. per fathom. The lode in the 46 end east is showing a much better appearance than for some time past, in ground favourable for opening. The lode in the stope over No. 2 cross-cut on the caunter is worth from 12¢, to 15¢, per fathom.

NEW CARADON.—N. Richards, Nov. 7: We have had timber brought on the mine, and have also five men clearing and securing adit, &c. I see we shall have to put in footways, and secure the adit in adits in order to ventilate the level, which is choked in a little way from mouth of same, but how long the run is I cannot as yet say; you shall, however, be kept advised as to all these matters.

NEW KITTY.—W. Vivian, Nov. 9: The Engine-shaft: We shall complete sinking to the 50 in about a week from this time, where I purpose immediately to drive a cross-cut south to intersect West Kitty rich Flat lode. We are making good progress in clearing up Thomas's shaft, where I purpose to sink on the caunter the lode.

NEW TERRAS.—T. H. Pryor, Nov. 9: Ground continues favourable for sinking in the engine-shaft; we have already sunk about 10 fms., and timbered the same all the way. We occasionally meet with some rich branches of tin in the shaft. The ground is of beautiful character for the production of tin. We intend to sink 10 fms. deeper, and then put out a cross-cut to the lode, which will bring us underneath the rich course of tin gone down in the winze. We are pushing on with the adit, which is laying open an extensive run of tin ground. A few fathoms to the west of the winze we have discovered a lode running at acute angles with the great lode, and has been opening in the quarry, from which we have broken good tin stuff. The stamps are on the mine.

NEW WEST CARADON.—N. Richards, Nov. 8: The 33 cross-cut, south of Hallett's shaft, is now being driven through a very pretty channel of ground, and is being urged on with all possible dispatch. The lode on which we are driving, east of cross-course at this level, is about 14 in. wide, producing stones of rich copper ore. As soon as the present part of men's stint is out we shall increase the number here, as the cross-cut is now advanced far enough to admit of our doing so without interfering with the work of the other shafts. It is important that the ground should be opened up and the lode pierced to the east of our present working as quickly as possible. All other points are much the same as when reported on last week.

NORTH BLUE HILLS.—S. Bennetts, Nov. 8: A sort of caunter lode, having a south-west underlie, has just been sunk through in the adit west end, which has cut off the lode on which the adit level is driven, and thus far is not found on the western side of it. This caunter lode is 2 ft. wide, and contains both blende and mundie, but as the lode is so small, and has been opened in the quarry, from which we have broken good tin stuff. The stamps are on the mine.

NORTH GREEN HURTH.—J. Polglase, Nov. 2: The deep cross-cut end has passed through the wet ground; it is now dry, no other change. There is no alteration in the drive south from the deep level, or in the end south from the shallow level cross-cut.

NORTH HERODSFOOT.—J. Trelease, Nov. 9: We have taken down the lode in the 117 end, which is 1 ft. 6 in. wide, and worth 7 cwt. of ore per fathom. There is still a quantity of water issuing from the cut. The lode in the winze is quite so productive as it was; it is now worth 5 cwt. per fathom. The stope in the winze continues to yield 7 cwt. of ore per fathom. We have no other change to notice.

NORTH PENSTRUTHAL.—Stephen Davey, Wm. Polkinghorne, Nov. 9: We have no change of special note since last advised. The various points of operation are being pushed on with vigour.

OKEL TOR.—H. Bulford, J. Rodda, Nov. 9: Good progress is being made in cutting down the new eastern shaft below the 50, and we hope to reach the 60 by the end of the present month. The lode in the 50 east is still a promising character, being composed of capel, peach, quartz, and a little copper ore and mundie. The part of the lode carried in the winze sinking below the 50 is turning out 13 tons of arsenical ore per fathom. There is another part of the lode standing to the north, which will be stripped out after the winze is holed. We have three stope working in the back of the 50 east, on the intermediate lode, producing on the average 3 tons of arsenical ore per fathom. The stope in the bottom of the 65, in the western part of the mine, is yielding 8 tons of arsenical ore per fathom. The three stope in the back of the 65 are yielding respectively 16 tons, 13 tons, and 10 tons of arsenical ore per fathom. The stope in the back of the 35 are producing 12 tons of arsenical ore per fathom.

OLD GUNNISLAKE MINE.—Wm. Skewis, R. C. Secombe, Nov. 8: We have passed through the great cross-course, which is of a most beautiful character, having in its composition large quantities of decomposed quartz and fluor spar permeated with copper ore. We think these indications very favourable for finding something good when we cut the Bunyade level. We have, however, secured the level where it passes through the cross-course by means of brick arching. The ground on western side of cross-course is very favourable for driving; a good progress is being made, having already driven over two fathoms.

PARYS COPPER CORPORATION.—T. Mitchell, Nov. 9: The 65, east of cross-course, continues to look much the same as when last reported. The lode at the surface trial has a little improved; but we have not been able to do much here this week on account of having so much water caused by the heavy rains.

PELYN WOOD.—T. H. Bennett, Nov. 9: We continue to drive west on the lode, and as we proceed it is more defined and improves. We hope in a few days to be enabled to report the size of a well defined lode, and a promising character. The part of the lode carried in the winze sinking below the 50 is turning out 13 tons of arsenical ore per fathom. There is another part of the lode standing to the north, which will be stripped out after the winze is holed. We have three stope working in the back of the 50 east, on the intermediate lode, producing on the average 3 tons of arsenical ore per fathom. The stope in the bottom of the 65, in the western part of the mine, is yielding 8 tons of arsenical ore per fathom. The three stope in the back of the 65 are yielding respectively 16 tons, 13 tons, and 10 tons of arsenical ore per fathom. The stope in the back of the 35 are producing 12 tons of arsenical ore per fathom.

PENHALLS.—S. Bennetts, J. Goyne, Nov. 8: The lode in the 80 west end is about 2½ ft. wide, but not quite so productive as last reported; at present is worth 5¢, per fathom. The 70 east end is poor. The 60 east end, on the south section of the lode, is worth 6¢, per fathom, and the west end on this section is worth 7¢, per fathom. In the 60 north there is no further lode found as yet. The north lode in the west end is in contact with a new lode, and is now worth 10¢, per fathom; and two stope in back of this level are worth respectively 10¢, and 15¢, per fathom. The winze below the 30 is worth 8¢, per fathom.

PHENIX AND WEST PHENIX UNITED.—J. Truscott, Nov. 9: Setting Report: Secombe's Shaft: The 200 to drive west from a point east of this shaft, by six men, at 15¢, per fathom; lode worth 8¢, per fathom.—Old Sump Shaft: The 150 to drive west, by two men, at 16¢, per fathom; the north part of the

We regret to announce the death, after a few days illness, at the age of 48 years, of Mr. JOHN FURNEAUX PEARSE, well known to any readers of the *Mining Journal*, in connection with the firm of John Taylor and Sons, in whose service he had been for upwards of 20 years.

TO THE METAL TRADE.

FOR COPPER, FIN, LEAD, &c., apply to—
MESSRS. PELL, BOYLE, AND CO.,
SWORN METAL BROKERS,
ALLHALLOWS CHAMBERS, LOMBARD STREET, LONDON.
(ESTABLISHED 1849.)

JOHN G. EAST,
NEWCASTLE-ON-TYNE.

BROKER FOR THE SALE OF PIG-LEAD, LEAD ORES,
COPPER ORE, COBALT, MANGANESE, CARBONATE OF
BARYTES. ESTABLISHED 1866.

HENRY NUTT AND CO.,
No. 119, BRISTOL ROAD, BIRMINGHAM
PURCHASERS OF
LEAD ASHES, LEAD SLAGS, SULPHATE OF LEAD, TIN
ASHES, TERNE ASHES, AND ALL REFUSE CON-
TAINING TIN AND LEAD.

HENRY WIGGIN AND CO.,
(LATE EVANS AND ASKIN),
NICKEL AND COBALT REFINERS,
BIRMINGHAM.

S. A. EDWARDS AND CO.,
METAL MERCHANTS AND BROKERS.
SOLE AGENTS FOR THE CELEBRATED SWEDISH STEEL,
BRANDED "SANDVIK."
6, GREAT CHARLES STREET, BIRMINGHAM.
OLD METALS OF EVERY DESCRIPTION PURCHASED FOR CASH.

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, Nov. 10, 1882.

IRON.	£ s. d.	£ s. d.	TIN.	£ s. d.	£ s. d.
Fig. GMB, f.o.b., Clyde...	2 10 0	—	English, ingot, f.o.b. 102	0 0 103	0 0
Scotch, all No. 1...	2 10 9	2 11 0	bars	0 0 103	0 0
Fars, Welsh, f.o.b. Wales	5 15 0	6 0 0	refined	0 0 104	0 0
" in London	6 5 0	6 10 0	Australian	0 0 105	0 0
" Stafford	7 10 0	—	Banca	99 0 0	99 10 0
" in Tyne or Tees	6 0 0	6 5 0	Straits	99 0 0	99 10 0
Swedish, London	9 15 0	10 0 0	COPPER.		
Halls, Welsh, at works	5 15 0	6 0 0	Tough cake and ingot	72 0 0	74 0 0
Sheets, Staff., in London	9 0 0	—	Best selected	75 0 0	76 0 0
Plates, ship, in London	9 5 0	9 10 0	Sheets and sheathing	80 0 0	81 0 0
Hoops, Staff.	8 0 0	—	Flat bottoms	83 0 0	84 0 0
Nail rods, Staff., in Lon.	7 10 0	—	Wallaroo	74 0 0	75 10 0
STEEL.			Burra, or P.O.	71 0 0	73 0 0
English, spring	12 0 0	13 0 0	Other brands	74 0 0	—
cast	10 0 0	11 0 0	Chili bars, g.o.b.	69 0 0	—
Swedish, keg	15 0 0	—	QUICKSILVER.		
fag. hump	15 0 0	—	Flasks, 75 lbs., war.	5 17 6	—
Halls at works	5 5 0	5 10 0	PURCHASER BRONZE.		
" Light, at works	6 10 0	6 15 0	Alloys I, II, III, and IV.	£125 0 0	—
LEAD.			" VI. and VII.	140 0 0	—
English, pig, common	14 0 0	14 2 6	" XI, Spl. bearing metal	117 0 0	—
" L.B.	14 0 0	14 7 6	BRASS.		
" W.B.	14 0 0	14 15 0	Wire	8 0 0	—
" sheet and bar	15 0 0	—	Tubes	10 0 0	—
" pipe	15 0 0	—	Sheets	8 0 0	—
" red	15 0 0	—	Yel. met. sheath. & sheets	6 0 0	6 0 0
" white	20 0 0	22 10 0	TIN-PLATES,*	per box.	—
" patent shot	16 10 0	—	Charcoal, 1st quality	1 0 0	1 0 0
Spanish	13 12 6	13 15 0	2nd quality	1 0 0	1 0 0
NICKEL.			Coke, 1st quality	0 18 0	—
Metal per cent.	15 0 0	16 0 0	2nd quality	0 16 0	0 17 0
Ore 10 percent. per ton	20 0 0	25 0 0	Black, Staff. or Gla.	12 0 0	—
SPKELTER.			at Liverpool	12 0 0	—
English Swansea	16 5 0	16 15 0	Black Taggers, 450 of	30 0 0	—
English	17 0 0	—	14 x 10	—	—
See zinc	20 0 0	20 5 0			

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for
Ch. at 1s. 10d. per box less for 100 tons above, and 4s. for each X.
To ne-plates 2s. per box below tin-plates of similar brands.

REMARKS.—During the past week the metal market has been rather irregular, at least so far as the leading metals are concerned. Opening dull, and with a depressed tone, reduced prices were at times accepted, the amount of business doing being insufficient to support previous quotations, while the markets were further weakened by some "bear" sales, combined also with only a limited amount of regular business being carried through. At times, however, on the other hand, a recovery has been visible in the tone, and buying rather than selling has been the most prominent feature. Since then the markets have been so very fluctuating the true state of the trade—that is to say, whether present circumstances warrant the maintenance of prices or not—can scarcely be gathered from the movements recorded during the past week. They have been influenced to some slight extent by the various monetary reports that have been circulated, and as the chances of dearer money have been increased or reduced, so have prices for the most part rallied or fallen. So much sensitiveness in the markets may be taken as an evidence of the existence of a vast amount of speculative interest, and consequently for a time we may see quotations governed almost entirely by operators, and the various changes not based upon the legitimate business of the market. It is, therefore, quite impossible to give any sure prediction of the immediate future of the trade. Much will depend upon the state of the money market, and much will depend upon the movements of speculators. Whatever course they adopt others usually follow in their train, and consequently they have the power to create an artificial or depressed feeling.

For a time, therefore, up and down movements may repeatedly be expected without any apparent cause, but just merely as it suits the whims and fancies of operators, and the markets may remain in the same disorganised state as they have done during the past week. Of course, after a while, the statistical position of the markets, the question of supply, and the genuine demand, must begin to assert themselves; and, therefore, notwithstanding for the immediate future changeable markets may be looked for, yet it will be interesting for a while to look at the real position of the trade. The genuine demand just now, taken on the whole, is exceptionally quiet; in fact, consumers appear determined not to pay current prices, except when their pressing wants force them into the market. All metals are alike, and although there is still some briskness remaining in some of the manufacturing centres, yet it is caused almost entirely from the execution of old orders, and not from new business. This appears to be the general state of the demand, and here and there a moderate business is being reported; but the trade, taken on the whole, is characterised by marked slowness. This, however, does not say the demand is likely to continue inoperative, although in some quarters it is thought that the season has now too far advanced to admit of any appreciable revival; but, be this as it may, it is certain that the autumn demand, especially for shipment, has not been equal to what was expected of it; but, on the contrary, has been noted for its inactivity, and, therefore, there is a greater chance of an increased business shortly being transacted; but how long or less is likely to be delayed is a matter upon which opinions are divided, and upon which we will not now attempt to discuss; but for reasons already stated during the interim, prices may be expected to fluctuate considerably.

COPPER.—This market has been rather variable, but a fair business has been done in Chili bars at fluctuating prices. With regard to general business, the trade must be reported dull, there being a marked scarcity of orders for shipment. Prices for manufactured are in consequence somewhat easy, the prevailing quotations being quite nominal. Notwithstanding the limited purchases that have recently been made for India, and the unfavourable comparisons the exports show with those for the corresponding time of last year, yet at present there seems to be but few, if any, symptoms of any revival; and although it is thought that these limited exports must soon create an increased shipping demand, yet at present there are no signs of a very extraordinary demand. Smelters are already said to have purchased the raw material somewhat freely, and in proof of this there are the recent excellent deliveries, consequently many believe that this will have a detrimental effect upon the immediate future demand, but whether this will be so or not the latest statistics have shown a continued improvement in the actual state of the market. These returns have on more than one occasion been the means of stimulating the demand for speculation, and this week as prompts have fallen due, and the market at times has shown symptoms of wavering, some holders have considered it more politic to rid themselves of their stocks, while buyers generally have been reluctant to make purchases unless reduced prices were taken. However, in some quarters there is a strong opinion prevailing that prices will not further materially recede, but may quickly recover what they have lost, and as instance of this we need only refer to the state of the market on Tuesday last, and the opening of Wednesday, when symptoms of recovery were visible, buying of Chili bars became very active, and holders less disposed to make sale. At the public ticketing, held at Swansea on the 7th inst., 1130 tons of an average produce of 11½ per cent. were sold, at an average of 4s. 5½d. per unit.

IRON.—This market continues to assume a steady appearance, but business is not very active. The strike difficulties which have for so long tended to unsettle this market have now in most cases been

amicably arranged, the general advance in wages being 10 per cent., but there are still difficulties between employers and employed where men as yet have not seen their way clear to join in this advance. Taking the iron trade as a whole there is fairly regular employment, the chief amount of activity being reported in the South Yorkshire districts. But it is to be regretted that, notwithstanding the fairly good state of the trade, looking at it in the above point of view, yet the shipping demand for manufactured does not improve, but remains very dull, shippers refusing to pay present quotations. In fact it seems likely, in order to stimulate this branch of the trade, it will be necessary to make concessions in prices. Some manufacturers seem already to have realised this fact, and while Staffordshire descriptions remain strong sellers of the inferior classes of iron have shown their willingness to make some slight concessions in their prices. With regard to Swedish iron the demand keeps very languid, and sales can only be made at reduced rates. Advances from India are not altogether very satisfactory, and from some parts indents come at lower limits, while in a few cases the markets there are said to be over-supplied. Turning from the manufactured to the raw material, the feeling of depression which was so pronounced in the warrant market last week was not altogether warranted by the real state of the trade, being merely caused by some holders selling heavily. Sales not being pressed so freely this week prices have recovered, as will be seen from the following returns from Glasgow, while a very fair number of transactions have been carried through.

In makers' iron there is not much doing, and quotations are a shade lower. On Monday last the Glasgow warrant market opened at 49s. 4½d., and a good business was done up to 49s. 8d., while on Tuesday a still firmer feeling prevailed, and various transactions were recorded between 49s. 8½d. and 50s. 1½d., there being sellers at the close at the highest point. On Wednesday the market was again weaker, and yesterday business was done from 49s. 7d. to 49s. 11d., closing stronger, with buyers at the highest point, while to-day's price is 50s. The shipments last week were scarcely so large, being 10,792 tons, against 11,333 tons for the corresponding week of last year, or a decrease of 541 tons, and which makes the total shipments for the whole of this year 547,809 tons, against 497,425 tons for the same time of last year, and 591,693 tons for the similar period of 1880. There is one more furnace in blast, making a total now of 114, while the public stock has been reduced by a further 628 tons, now amounting to 618,469 tons, against 619,095 tons last week. The imports of Middlesbrough pig-iron into Grangemouth last week were not much more than half of what they were for the same week of last year being 4782 tons, against 9455 tons, or a decrease of 4675 tons, and which leaves a total decrease for the whole of this year, compared with last, of 53,984 tons. The Middlesbrough market is said to be void of animation, and quotations are for the most part lower, with the exception of makers' prices, which have not undergone any particular alteration, No. 3 being generally quoted at 45s., but in some instances only 44s. 6d.; while merchants quote 6d. less than this latter figure. Sellers' price for warrants is 44s., but buyers for the most part will not pay this figure. Steadiness characterises the demand for manufactured, and prices for ship-plates remain at 6½ 12s. 6d. to 6½ 15s., and bars are quoted at 6½ 5s., and angles at 6½; puddled bars ruling at 6½ 4d. per ton.

There is no particular change in the condition of the Wolverhampton market; prices, taken on the whole, remain fairly steady, and a moderate business is being transacted, both in the manufactured and the raw material. There is, however, scarcely so much briskness in the demand as a short time back. At Birmingham in some isolated cases reduced prices have been accepted, the less flourishing state of trade in general producing an adverse effect upon the market. There is a fair enquiry for medium bars and angles, while the demand for sheets is fully maintained. In pigs there is not much doing, what sales there are being principally for small parcels. Advances from Sheffield show that market to be fairly steady, and a fair business has been done in the various classes of iron, Derbyshire and Staffordshire brands being in good request; and, while bar iron is a trifle cheaper, pigs are firmly upheld. The reports from Wales are fairly satisfactory, and a tolerably good business has been done in rails. There is a good deal of briskness at some of the works, and fair shipments have been made to America. The advices from New York of the 2nd inst. report scarcely so much business doing, and prices are in some cases slightly lower. Here, too, some sorts of native iron are being sold at a discount, without variation, while No. 1 Gartsherrie is quoted at 32s. to 32s. 50; Glengarnock at 32s.; Coltness at 32½; and Eglinton at 32s. 50. 8-c-p is 2s. lower and old rails 4s. higher, being quoted at 32½ 50 and 31 respectively.

TIN.—Numerous changes have to be reported from day to day in this market, and the turnover has continued extremely heavy, some times at falling prices, and at others when they have a strong upward course. Opening dull and with a good deal of disposition to press sales, the market fell away considerably on Monday, but has since recovered, although in effecting this improvement some very sharp movements have accompanied it, and the market has been very disorganised and irregular, so much so as to render it impossible to place any faith in the steady course of the trade. There is much to argue in favour both of an upward and downward future course of prices. For instance, with the increased supplies which are coming forward, the total visible stock was seen by the last returns to have been augmented, and this feature, taken in connection with the disposition shown by some dealers to depress the market, gives the idea that prices may recede; but then, on the other hand, deliveries are reported to be sustained upon a fairly large scale, and since prices have already, in a very short space of time, been greatly reduced, there is a chance of the rebound shortly being effected, and the tendency of the market to-day is decidedly in favour of the view. A public sale is just announced to take place at Amsterdam on the 30th inst., when 22,900 sabs Banca will be offered.

LEAD has slightly improved, Spanish being quoted at 13½ 12s. 6d. to 13½ 15s., and English at 14½ 12s. 6d. to 14½ 15s. SPKELTER is easier, ordinaries being quoted at 16½ 5s. to 16½ 10s., and specials at 16½ 10s. to 16½ 15s.

STEEL remaining low in value, with a moderate business doing.

TIN-PLATES.—A fair business is doing at steady prices.

QUICKSILVER.—The Board of Trade Returns for October are:—

Imports during October	Bottles	1882.	1881.	1880.
January–October	2,111	600	960	—
Exports during October	48,161	47,045	44,728	—
January–October	937	2,032	3,374	—
January–October	12,236	19,330	31,780	—

and these figures indicate that the consumption is maintained on a satisfactory scale; but this avails little in view of the heavy stock and second-hand pressure to sell. The importers hold for 5½ 17s. 6d.; but second-hand parcels offer at 5½ 17s., and even cheaper. The price at San Francisco is 37c.

THE MINING SHARE MARKET, sympathising with metals, has been weaker since our last; there has been less doing in speculative shares, and the quotations of tin stocks generally are mostly nominal. Those dealt in have included South Caradon, East Caradon, West Caradon, New Caradon, New West Caradon, Langford, Prince of Wales, Wheal Crebor, West Crebor, Wheal Kitty, Russell United, West Kitty, West Peavor, Tankerville, Gunnislake (Clitters), and a few others.

TIN shares have been flat and much weaker, and the standards for ore have been again reduced 2½ per ton, thus making the fall 10½ per ton. Blue Hills are quoted 1 to 1½; Carn Brea, 9½ to 10; Dolcoath, 71 to 73; East Lovell, 1 to 1½; East Pool, 50 to 52½; Killifreth, 4½ to 5; Kit Hill, ½ to 1; Drakewalls, ½ to 1; New Kitty, 2½ to 3; South Condorow, 9½ to 9½; South Crofty, 12 to 13; South Frances, 9 to 9½; Tincroft, 8 to 8½; West Basset, 7½ to 8; West Frances, 11 to 12.

Wheal Peavor, 3½ to 4; at the meeting the accounts for four months showed a loss of 1875½ 8s. 1d., and a debit balance of 2300½, against which a call of 10s. per share only (1500½) was made. There is due to merchants 2647½ 8s. 10d.; lords' dues, 330½ 17s. 2d.; bills, 54½ 16s.; Cornish bank, 1539½ 9s. 1d.; making liabilities 4591½ 16s. 9d. The agents report the necessity for a call; but as there are several points to come off, they hope to increase returns and improve their position. Wheal Agar, 17 to 17½; Wheal Basset, 9 to 9½; Wheal Grenville, 9 to 9½; Wheal Jane, ½ to 1; Wheal Kitty (St. Agnes), 1½ to 2; Wheal Ury, 4½ to 5; East Blue Hills, 9s. to 11s.; North Blue Hills, 3s. to 4s. Cook's Kitchen, 36 to 38; at the meeting the accounts showed a loss of 1496½. At North Bury a call of 4s. per share was made. West Peavor, 9½ to 10; at the meeting the accounts showed a loss on four months' working of 1393½. The tin sales realised 2200½. At New Peavor the costs for four months amounted to 63½. West Kitty, 13½ to 13½; at the meeting on Oct. 28 a dividend of 7s. 6d. per share is expected. Trevaunance, 2½ to 2½; Mounts Bay, ½ to 1; Tresavean, 1 to 1½; Goodever, 1 to 1½; Polrose, ½ to ½; West Phoenix, 10s. to 15s.; New Tramper, 1 to 1½.

COPPER has slightly given way, and there has not been quite so much doing in shares; but, on the whole, the speculative market has been well sustained. Bedford United, 1½ to 2½; Carnarvon Copper, ½ to ½; Devon Great Consols, 5½ to 6; Devon Great United, ½ to ½. East Caradon have further advanced, and leave off 2 to 2½; we do not hear of any change in the mine, but the name is foremost just now. South Caradon, 35 to 40; West Caradon, 25s. to 30s.; New West Caradon, 10s. to 12s. 6d.; the New Caradon, 5s. to 7s. 6d. Wheal Crebor, 3 to 3½; at the meeting the accounts showed a profit on four months' working of 1681½ 0s. 3d., and a balance of assets over liabilities of 3016½ 3s. 8d. A dividend of 2s. 6d. per share (1500½) was declared. The copper ores sold realised 4051½ 11s. 1d.; mundic, 119½ 11s.; and the committee reported that since the last meeting they had paid off every debt on the mine, and the only liability upon it was the dues on ores not yet received. After paying a dividend of 2s. 6d. per share, and putting by 50½ per month (200½) towards the 13th month that comes in every year, there will remain ore bills in hand sufficient to meet three months' costs to be incurred before the next receipts for ore.

Gunnislake (Clitters), 3½ to 4; Hingston Downs, 13s. 9d. to 16s. 3d. Langfords have been very largely dealt in at 10s. to 12s. 6d.; Marko

Valley, 17s. 6d. to 22s. 6d.; Mellanear, 4½ to 5; Parys Copper Corporation, 8s. to 10s. South Devon United 15s., to 17s. 6d.; West Crebor weaker also, owing to the meeting being called, and they leave off 9s. to 11s.; the lode is still worth 10½ per fathom. West Seton, 21 to 23; West Tolgus, 16 to 18; Mona, 3½ to 4; Mona Consols, 1 to 1½; West Devon, 10s. to 12s. 6d.; New Cook's Kitchen, 6½ to 7; at the meeting the accounts showed a loss of 111½, and a debit against the shareholders of 1374½. The copper ores sold realised 1029½. Devon Friendship, 7s. 6d. to 8s. 6d.; the agents report the mine to be looking well. Sortridge Consols, 6s. 6d. to 7s. 6d.; the stamps are working well. Prince of Wales declined to 10s. 12s. 6d. without any change in the mine; but on Friday a sudden demand sprung up, and they leave off 12s. to 14s.

LEAD shares continue flat, with mere nominal quotations. Vans are quoted 5½ to 6½; Great Laxey, 17 to 18; Roman Gravels, 9½ to 9½; Goddards, 1 to 1½; Leadhills, 3½ to 3½; Pennant, 4½ to 5; Penyr-Orsedd, 1 to 1½; Sinclair, 1 to 1½; West Lisburn, 3 to 4; Goginan, 1 to 1½; Frongoch, 1½ to 2; this mine has sampled 60 tons of lead for sale next week. Tankerville Great Consols, 5s. 6d. to 6s. 6d.; from the manager's report the mines are looking well throughout. The 80 at Pennerley is worth 4 tons of lead ore per fathom, and the 113 at Potter's Pit 2½ to 3 tons. The lead and blende sold this week have realised about 1400½, against 1250½ last month. Grogwinion, 1½ to 1½; North Grogwinion, 1 to 1½; East Rose, 1½ to 1½; Old Shepherds, 1 to 1½; Gorsedd and Merlyn, 2 to 2½; South Darren, 1 to 1½; the sale of ore this week, 45 tons, realised 14½ 5s. per ton. Gwernymynydd, 3 to 4.

FOREIGN MINES.—Akankoo, 3 to 3½; Alamillos, 1½ to 2; Almada and Tinto, 3 to 3½; Anglo-African Diamond, 3 to 5; Broadway, 3 to 3½; Cape Copper, 54 to 55; Cape of Good Hope Diamond, 3 to 4; Central Jagersfontein, 3 to 4; Coatacavil, 3 to 4; Copiapu, 4 to 4½; Davala Central, 3 to 4; Devala Moya, 3 to 4; Fortuna, 3 to 4; Frontino and Bolivia, 2½ to 2½; General Mining, 5½ to 5½; Hoover Hill, 1-16th to 3-16th; Indian Consolidated, 5½ to 5½; Indian Glenrock, 3 to 4; Indian Phoenix, 3 to 4; Indian Trevelyan, 3 to 4; Kapanga, 3 to 4; Kimberley North Block, 5 to 7. La Plata, 2 to 2½; for the week ended Nov. 4 the smelting statement shows: Ore purchased, 1147 tons; smelted, 965 tons. The silver produced was 18,450 ozs., and the value of the consignment was 5416½.

Mysore, 3 to 3½; New Quebrada, 4½ to 5; Nouveau Monde, 3 to 3½; Panulicoll, 6½ to 7; Richmond, 8 to 8½; Rio Tinto, bonds to bearer 99 to 101; ditto, shares to bearer, 23½ to 24½; South-East Wynad 1½ to 1½; Wynad Perseverance, 3 to 4; Birdseye Creek, 1½ to 1½; Corporation of South Australia, 3 to 4; Organo Gold, 2½ to 3; Orita, 1½ to 1½; St. John del Rey, 180 to 190; Tolima, 6 to 7; Victoria Gold, 1 to 1½; Colombian Gold, 7s. to 9s. Bratsberg very quiet at 1½ to 2½; the Mary Owen has sailed this week with another cargo of ore, making two cargoes now on their way. Yuba, 1 to 1½; Kapanga, 3 to 4; Placerville, 1 to 1½; Michipicottan, 3 to 4.

The Market for Mine Shares on the Stock Exchange has again been very dull, and the tendency of prices is without exception downward, although from the fact that there is very little business doing at all, the quotations are little more than nominal, and holders have to submit to heavy sacrifices if they be compelled to force sales. There has been a further fall of 2½ in the tin standards in Cornwall, and at the copper ore ticketing at Swansea on Tuesday there was also a decline, but lead is somewhat better.

Our usual telegram from Cornwall this evening states:—The unsettled state of the tin market, and the further reduction of 2½ in the tin standards, has caused the Cornish share market to continue dull. There is, however, a feeling that the depression is only temporary and that prices will improve, it being anticipated that a better demand for tin will soon be felt. At North Bury meeting a loss of 1120½ was reported, 4s. per share being called up. Five meetings were held yesterday. West Peavor lost reported 1373½; 10s. call made. Wheal Basset loss reported 3456½; 12s. call made. Cook's Kitchen loss reported 1496½; New Cook's Kitchen, loss 111½. New Wheal Peavor reported about 70½ in hand. Carn Brea 9½ to 9½; Dolcoath, 72 to 72½; East Pool, 50½ to 51½; Killifreth, 4½ to 4½; Tincroft, 8½ to 9; West Basset, 7½ to 7½; West Peavor, 10 to 10½; West Frances, 11½ to 12; West Kitty, 13½ to 13½; West Seton, 20 to 22; Agar, 17 to 17½; Wheal Basset, 9½ to 10½; South Tolcarne, 4½ to 5.

In Electric Light Companies shares the transactions have been less numerous than for many weeks past, and prices have with one or two exceptions tended downward. For brilliancy and steadiness none of the systems used in London for street illumination appear to maintain their original standard, and the improvements in gas illumination bid fair to drive them out of the field altogether, still where large spaces have to be illuminated electricity has no competitor. The Maxim-Weston Electric Company has just concluded an advantageous contract for the sale of their patent rights for the whole of the Australian colonies, New Zealand, and Tasmania, and the first installation will leave this country by next mail steamer. This is the second valuable concession sold by the Maxim-Weston Company within the past few weeks, as the Lancashire Maxim-Weston Electric Company, which has just been floated, has purchased its sole patent rights for that county, Cheshire, and North Wales. It is understood that further arrangements of a similar nature are in progress. It is announced that Mr. H. W. Merchant has been appointed managing director of the Maxim-Weston parent company.

In Diamond Mine shares there has been scarcely anything doing, the slight activity noticed a few weeks since having entirely disappeared. A statement has been published which is scarcely intelligible. It is said that "the diamond fields of South Africa produce large quantities of yellow diamonds. This colour, of course, lessens the value considerably, and a white diamond is worth five to six times as much as a yellow one of the same weight and quality. It was recently reported that a method of removing the colour had been discovered. Such is the case, but the important addition has to be made that the yellow re-appears after a slight washing, as some French merchants lately found out to their cost, after purchase at a high price of some perfectly white diamonds. The method is a simple application of the law of complementary colours. The yellow diamond is put in some violet solution. A slight coating of violet suffices to render diamonds of the most pronounced yellow tint perfectly white." Such a discovery would indicate ingenuity, no doubt, but as a matter of fact, the defect of even the best Jagersfontein stones is that they approach opalescence more nearly than a fine Brazilian diamond, and such a washing as that referred to would beyond question give the diamond such an appearance as could not deceive the practised eye.

Carn Camborne are quoted 1½ to 1½; an improvement is reported in the 95 fm. level.

Devon Great Consols, 6 to 6½; it is reported that operations are being pushed on in the various levels driving east and west on the new south lode with improving prospects, and that a wide lode is being opened out at Watson's part of mine containing rich quality copper ore. Devon Great United, 3 to 3½; the levels driving west are being pushed on with a hope of making discoveries in this direction. East Wheal Rose have advanced ½, to 1 3-16th, 1 5-16th, owing, it is said, to the scarcity of stock; sellers having had to pay 25s. on buying-in day, several parcels having been bought in upon the Stock Exchange by the official broker of the house.

Kit Hill Great Consols, 3 to 3½; a good lode is being opened out in the bottom of the winze of the 62, west of the north shaft, worth 12½ per fathom.

Mounts Bay, 13-16ths to 15-16ths, continue a firm market. Many attempts have been made to break this market, but on each attempt stock has been bought up by holders. A back of 3d. per share has been paid for the loan of them to meet account.

Old Shepherds have advanced ¼ per cent., to 1½, on the report of the discovery of a valuable lode at the 26 fm. level.

South Devon United, 3 to 4; it is reported that Martin's shaft has been sunk 50 fms., and Pickston's shaft is down 15 fms. under the 140 fms. level, and the cross-cutting to the lode is now being pushed on with all force, so that in a short time this important point in the intersection of the lode will be reached.

Tresavean, 1½ to 1½; it is reported that these shares continue a favourite investment, and being now held in fewer hands any further buying would cause a rapid advance.

West Godolphin, 1½ to 1¾; in the 50 a rich stone weighing over 100 lbs. of nearly clean tin was taken out last week, and from other favourable indications it is thought that a good deposit is near at hand. The winze at the bottom of the 70 west, on Bellingham's lode, is still going down in a good course of ore, worth 12½ per fathom. This point, it is continued, will soon be communicated with the 80 fm. level, and thereby open up a fine length of ore ground. The lode at the bottom of the 70 east on counter continues to be worth 2½ per fathom, which bids fair for an early improvement at the 80. The winze shaft is holed to the 20 fm. level on Hope lode. Tribute ground to a considerable extent is now available for working.

East Caradon, 1½ to 2½; important changes for the better are reported. The cross-cut in the 130 fm. level, going south, will, it is thought, in all probability soon strike something that may give a new life to the undertaking. During the past week a branch or lode has been intersected in the said cross-cut about 20 in. wide, 1 ft. of which is rich yellow copper ore and 8 in. of granite and capel intermixed, the ground beyond this branch being still favourable granite, the agents are of opinion that a large strong lode exists ahead; this is in virgin ground to surface running the whole length of the set.

Sortridge, 7s. 6d. to 8s. 9d.; a telegram from Capt. Wm. Skewis this morning says:—Deep adit men have now good air and making progress; lode in 30 stope worth 10½ per fathom; stamps working well.

Henriett, ½ to ¾ prem.; a telegram has been received from Mr. John Herrick, who was deputed to measure the mine; he says:—Estimate 40,000 to 45,000 tons ore on reserve; difficult to measure closely. Prospective value of the mine great in all headings, improving rapidly in quantity and quality. Letters have been received from the manager, Mr. Harker. The condition of the machinery (Oct. 1) is the same as last advised, with the exception of a new ore and shaft house recently erected at the Central shaft. He is working the old or lower shaft, and taking out a great deal of low grade ore that he can sell at a profit under the present advantageous contract, which admits of the shipment of low grade ore, that all previous prices have heretofore prevented; he calls attention to this, as it explains why the general average assay of the present shipments are not as high as Mr. Henry's reports state. At the time of Mr. Henry's visit prices were not so good as now, and only certain grades of ore could be shipped. At the Harker shaft we are stopping between 9th, 10th, and 11th levels. Between 10th and 11th levels the ore is 9 ft. thick. He has completed the new shaft and engine-house over shaft No. 3; this is the shaft (previously designated as Central shaft) now being deepened to intersect the main incline. Present working force 65 men all told. He adds (Oct. 10) that he has no hesitation in saying that the ore body developed since Mr. Henry's inspection is more than double in amount to what he saw last March. The vein is continuous, and seems to be less irregular as the hill is penetrated.

Richmond, 8 to 8½; the usual telegram from the mines states that the week's run was \$20,000 from 487 tons of ore with one furnace. During the week the refinery produced doré bars to the value of \$15,000. The superintendent's weekly report to Oct. 15 states that the 300 south-east drift from south-west drift has been extended 11 ft. Total 330 ft. In hard limestone, favourable, but without iron stains. The 800 east drift from top of winze in No. 17 chamber has been run 30 ft. Total 70 ft. In ledge matter. The 700 north-east drift from main west drift has been run 9 ft. Total 24 ft. In favourable limestone. The 700 north-east drift from rise (50 ft. above ore stope) has been run 10 ft. In ledge matter and some low grade ore. The 800 west drift from north drift from quartzite has been extended 18 ft. Total 286 ft. In compact favourable limestone. The 900 new north drift from west drift has been extended 23 ft. Total 233 ft. In favourable limestone. The 900 east drift from north drift from west drift has been extended 23 feet. Total 195 ft. In compact favourable limestone, mostly of west of work run through sandy limestone. The 900 rise (over ore stope) over north-east drift from north drift has been run 8 feet. Total 36 ft. Connected with 800 north-west drift. The 1050 north-west drift from station has been extended 30 ft. Total 91 ft. In compact quartzite.

Ruby and Dunderberg, 2 to 2½; new shares ¾ to 1 prem. The weekly report advises good progress in developing the ground between the 700 and 800 ft. levels. Several small bodies of ore and much broken ground are being met, which are considered favourable signs. The upraise from the 300 ft. west cross-cut has now been advanced 106 ft. towards the Home Ticket old workings. The work at the surface of Home Ticket is progressing well, and the ore body is increasing in size. The shipments of ore for the week were—from Dunderberg, 31 tons, and from Home Ticket 11 tons = 42 tons. Last week the amount received from tribute ore during September should have been stated over \$1000 (not \$100).

California (of Colorado) Gold, 1 to 1½; the telegrams from the mines, Nov. 8, states that the mill run was 286 tons, worth 620½; the ore sales were 400½.

Kohinoor and Donaldson, 1½ to 1¾; it is announced that the company has now taken possession of the Champion Mine, and commenced working it, and that the deed and United States patent have this week been received by the directors.

Indian Gold Mine shares have been much neglected through sympathy with the general market, and prices remain about the same. At the meeting of the Indian Gold Mines Company in Glasgow this (Friday) afternoon, the directors reported that more funds would be required. They thought matters were now improving, and Mr. Severn says he has cut a heavy reef on tunnel-road 400 ft. from surface. In trials of quartz 7 tons yielded 250 grs., about 1½ dwts. per ton; and 1½ ton yielded 58 grs., or about 1½ dwts. per ton also. He considers the stone, to near surface to give better results. A case of auriferous pyrites has been received from India, but the result was disappointing. A call of 2½. 10s. per share on the new shares will be made. The absence of gold in payable quantities in the Indian reefs appears to be more apparent from each additional report received. The reports of Brough Smyth were evidently fallacious, though whether from his incompetency, or from any less excusable cause, is not yet proved; and, unfortunately, the modes of raising the capital and managing the concerns have been such that, even had there been payable gold in the reefs, it is unlikely that any of it would have reached the shareholders. The purchase-money charged was fabulous, and the management has been almost criminally extravagant in one case, for example, not in the Devala, not only were the directors' fees fixed at the very handsome sum of 1500½, but a London manager was appointed at another 1500½ per annum exclusive of receiving 773½ for brokerage and 250½ for use of office and secretary. If any profit is to be hoped for there must be a total reorganisation of almost every Anglo-Indian company at present on the English market.

The Lead Market has been somewhat firmer during the week, and the general opinion is that an advance in prices will shortly take place. Tankerville Great Consols, 7s. to 8s.; considerable enquiry is said to have been made for these shares, owing to the further important discoveries of lead ores made this week. The valuations of the different points in operation are worth, together, for lead and blende, about 400½ to 450½ per fathom.

Romans Gravels (Shropshire), ¾ to 10 ex div.: the rich lode is, it is reported, being opened out in the various levels driving south, and especially in the 85 south, where there is a wide lode, worth 100½ to 120½ per fathom, and likely to improve further. This end is fast approaching the course of lead seen in the 65 south, and the levels below the 85 are also being pushed on rapidly to get under these large bodies of ore, when the reserve of ore ground will be increased. It is said that the last month's sale of 300 tons of lead ore would leave over 1000½ profit for the month.

Leadhills, 3½ to 3¾; the several points of operations are being pushed forward vigorously, and the mines generally continue to look well.

At Swansea Ticketing, on Tuesday, 1130 tons of ore, of 11½ average produce, and containing 128 tons 1 cwt. of fine copper, were sold for 8615½. 18s. 6d., being 7½. 12s. 6d. per ton of ore, 13s. 5½d. per unit, or 67½. 5s. 8d. per ton of fine copper in the ore, and an average standard of 91½. 8s. 10d. for 9 per cent. produce. Subjoined are the particulars of the two last sales:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Oct. 17, 1881	1491	10½	10½	£7 8 7	14s. 1½d.	£70 14 7
Nov. 7, 1881	1130	11½	11½	£7 12	13 5½	£67 5 8

Compared with the last sale the decline has been in the standard 3½. 6s. 5d., and in the price per ton of ore 7s. 6d. The Garonne ore gave 9½ per cent. produce, and sold at 14s. 3d. per unit; Spanish, produce 6½ per unit 11s. 10d.; Betts Cove, produce 5½ per unit 13s. 1½d.; New Quebrada, produce 10½ per unit 13s. 7½d.; Cambrian, produce 18 per unit 13s. 7½d.; Virneberg, produce 13½ per unit 13s. 6½d.; Merces, produce 2½ per unit 13s. 8d. There will be no sale on Nov. 21.

Orders have been made for winding-up of the London Medical and Chemical Company, General Horticultural Company, Lincolnshire Iron Smelting Company, International Supply Company, South-Eastern Bonded Warehouse and Wharf Company, and Barbaños Gas Company.

Petitions for winding-up the French Zoedone Company and Whitehaven Hematite Iron and Steel Company are to be heard before Mr. Justice Chitty on the 11th, and Yorkshire Brush Electric Light Company before Vice-Chancellor Bacon on the 11th, and Silkstone and Haigh Moor Company on the 18th inst.

Mr. Justice Chitty has fixed Nov. 13 for the appointment of official liquidators of the Surrey and Hampshire Canal Corporation and Georgia Land, Lumber, and Colonisation Company, and Mr. Justice Kay has fixed the 15th inst. for the appointment of an official liquidator of the General Share Trust Company.

A petition for winding-up the Indian Kingston and Sandhurst Gold Mining Company is to be heard before Mr. Justice Chitty on the 11th inst.

COPPER AND TIN.—MESSRS. RICKARD AND BUDD (Nov. 10) write: We are passing through rather a dull season just now, and prices of copper have receded about 3½ from the highest point reached in October. This is remarkable, as in November the highest price of the year is often touched. The Board of Trade returns show a falling off of nearly 7 per cent. in the exports, but probably a great deal of copper has gone away in the shape of machinery, steam engines, &c., which up to date show a very considerable increase over last year. There must be a large absorption of copper in the home centres—caused to some extent, doubtless, by the good harvest—as notwithstanding an increase of imports of nearly 7 per cent., and the decrease in exports previously referred to, public stocks, spot and aloft, were lower on Oct. 31 than at the close of any other month, with one exception, for some years past. Tin has been influenced in a downward direction to some extent by an increase of supplies, but to a much greater degree by market operations, which have no relation to the value of the article. We anticipate a rebound as the result of much smaller shipments from the Straits during the present month.

GOLD AND SILVER.—MESSRS. PILEY AND ABELL.—GOLD: We have but little to report in gold this week. There have been no arrivals of consequence, and no export demand. The Bank has received 61,000½ in bars and coin since our last, and an exceptional withdrawal of 47,900½ in bar gold took place to-day. 3450½ in gold coin was shipped to Madras per P. and O. steamer Ravenna. SILVER: The arrivals this week are 24,000½, per Handel, from the River Plate, and 43,000½, per Cordillera, from Chili. The consignment by the first-named vessel was sold on the 6th inst. at 51½d. per oz. standard, our last week's quotation. The bars, per Cordillera, have not yet been dealt with. Owing to the reduction in the minimum rate for the India Council last year, the market has become unsettled, and in the total absence of business no reliable quotation can be given. The P. and O. steamer Ravenna took yesterday 29,000½ to Bombay and 26,000½ to Calcutta. MEXICAN DOLLARS: There have been no arrivals since the date of our last circular. The market is inactive, pending advice of the French steamer at St. Nazaire due in a few days.

TREVITHICK MEMORIAL.—The movement inaugurated by Mr. Hyde Clarke (see *Mining Journal*, Oct. 21), with a view to secure a suitable memorial to Richard Trevithick—the fact that fifty years will in a few months have elapsed since his death affording an opportunity for doing so—is already receiving recognition, for it is proposed to hold a preliminary meeting of those gentlemen who are interested in the above object, at the Society of Arts rooms, on Wednesday next, Nov. 15, at 5 o'clock p.m., in order that some definite steps may be taken to promote its success.

BRATSBURG.—Advices have been received stating that the Mary Owens was to sail this week with another cargo of ore, making two cargoes now on the way. We understand that there is plenty of ore ready for another shipment.

HORNACHOS SILVER-LEAD.—Advices from the mines state that the fitter arrived at Afortunada on Oct. 31, and that he had commenced arranging the different parts of the steam air-compressor so as to have them at hand for erection, as the foundation was to have been finished on Nov. 7. The foundation for the compressor at the Desquidada Mine is in a forward state.

THE ALMADA AND TIRITO CONSOLIDATED SILVER MINING COMPANY (Limited).—At the meeting of shareholders yesterday the report and accounts were adopted, and it was stated that the latest advices from the mine continue to be of the most satisfactory character. A full report will appear in next week's *Journal*.

CWM DWYFOR COPPER (Carnarvonshire), AND BRYNARIAN LEAD (Cardiganshire).—We understand that a considerable number of shares have been already applied for in the new company being formed to acquire and work these mines.

OLD SHEPHERDS.—A splendid lode of silver-lead has just been cut at the 26 fm. level, which, according to advices, is worth from 2 to 4 tons per fathom—a wonderfully good discovery for such a shallow depth. It is considered to be now pretty sure that this justly celebrated old mine is likely to repeat its former brilliant history, and that very quickly.

MOUNTS BAY CONSOLS.—The report in to-day's *Journal* confirms the remarks which appeared last week stating that the tribute pitches at Trebarvah were improving. It also states the volume of water at the cross-cut is increasing, which indicates the lode is near, and if it be cut as rich as may fairly be anticipated from the very high value of its near neighbours, it will very materially enhance the value of this property, and have a favourable effect on the price of shares. A parcel of copper is being got ready for market, and dressing pushed forward as fast as possible.

TANKERVILLE.—It is stated that in addition to directors who have agreed to take up their large proportion of the New Ten per Cent. Preference shares, a considerable number of shareholders have already sent in their applications, the last day for this purpose being now approaching.

DEVON FRIENDSHIP.—The agents report that the mine is looking very well, and that the greater part of the new winding machine is delivered, and will be erected as fast as possible. The self-acting jiggers are also being proceeded with.

TREVAVEAN MINE.—Everything here is activity; the stamping and dressing-floors for preparation of tin for the market, always a slow and tedious process, is now working well, and the tin going steadily to the calciner or burning-house. After passing the final process an average sample produced 13½ in 20 of best quality metal, worth about 60½ per ton. The lodes are producing great quantities of tin-stuff and are large, having a considerable run through the sett; the supply seems almost inexhaustible. More stamping power is being put to work, and, from all indications, large sales may very soon be expected, and the mine should not be long before it is on the Dividend List.

EAST WHEAL ROSE.—The rapid progress being made in this mine is the subject of general remark, and it is said that men are fast taking up tribute pitches at prices which leave good profits to the shareholders. The lodes recently discovered are still maintaining their richness, and, judging from various reports, there appears to be no doubt the lode at the 20 when opened up—say, in about a fortnight—is likely to surprise many, and much enhance the value of the mine. The lodes at East Wheal Rose increase in value as depth is gained; and seeing that they are so productive at not more than 20 fms. deep, it seems tolerably certain there is great wealth beneath.

NOBEL'S BLASTING GELATINE.—The Australian of Aug. 12 announces from its Brisbane (Queensland) correspondent that a proclamation in the Government Gazette prohibits the importation of Nobel's blasting gelatine after Sept. 30.

LEAD ORES.					
Date.	Mines.	Tons.	Price per ton.	Purchasers.	
Nov. 7—Foxdale	50	£11 18 6	Sheldon, Bush, and Co.		
—ditto	50	11 18 6	Panther Lead Co.		
—Bwlch United	15	10 19 0	Nevill, Druce, and Co.		
—Talaroch					
—Maes-y-wyddu	70	9 14 0	Adam Eytton.		
—North Hendre	50	9 13 0	Quirk, Barton, and Co.		
—ditto	50	9 10 6	Quirk, Barton, and Co.		
—Van	160	10 8 6	Sheldon, Bush, and Co.		
—ditto	40	10 12 6	ditto		
—Tankerville Great Consols					
—Tankerville	50	8 12 6	Walker, Parker, and Co.		
—Bog	12	8 16 0	Nevill, Druce, and Co.		
—Pennerley	60	8 13 0	ditto		
—10—South Darren	45	14 5 0	ditto		
—Frongoch	has sampled 60 tons of lead ore for sale next week.				

BLENDE.					
Date.	Mines.	Tons.	Price per ton.	Purchasers.	
Nov. 4—Piercedale	50	£2 17 6	Villiers Spelter Co.		
—Talaroch	50	2 17 6	ditto		
—ditto	50	3 9 6	ditto		
—Bog	100	3 7 6	ditto		
—ditto	55	4 17 0	Vivian and Sons,		
—ditto	15	3 13 0	ditto		

C. PASS AND SON, BRISTOL,
ARE BUYERS OF
LEAD ASHES, SULPHATE OF LEAD, LEAD SLAGS,
ANTIMONIAL LEAD, COPPER MATTE, TIN ASHES, &c
and DROSS or ORES containing
COPPER, LEAD, AND ANTIMONY.

MANSON, WOODS, AND CARTER,
AMERICAN MINING AND FINANCE AGENT

Commissions undertaken personally or by letter.
Titles advised on, and certified abstracts obtained
Securities registered, and Dividends collected.

SPECIAL BUSINESS IN FIRST-CLASS
MORTGAGE BONDS.
Particulars on application.

BANKERS: LONDON AND COUNTY.
OFFICES: 36, KING WILLIAM STREET, CITY.
Agents for the New York "Mining Record."

EDGAR JACKSON,
(Associate Royal School Mines),
ANALYST AND ASSAYER,
Assays or Com. lete Analyses made of Copper, Silver, Lead, Zinc, Tin, and
other Ores.
ASSAYING TAUGHT.
106, QUEEN VICTORIA STREET, LONDON, E.C.

JOHN LENN AND CO.,
STOCK AND SHARE DEALERS,
5, GROCERS' HALL COURT, LONDON, E.C.

HOME MINING
IS NOW THE BEST CLASS OF SECURITY FOR
CAPITALISTS, INVESTORS, AND SPECULATORS
Profits of from 50 per cent. to 100 per cent. will be earned by
Christmas if careful selections be made.
MONTHLY CIRCULAR NOW READY, AND SENT POST FREE.

ROBERT C. FISHER AND SON,
GENERAL, CONSULTING, AND MINING ENGINEERS,
SWANSEA,
REPORT ON MINERAL PROPERTIES AND MINES,
ADVISE ON ALL QUESTIONS OF THE WORKING AND MANAGEMENT
OF MINES.

JOHN MEDLEY STUART, C.E.,
MINING AND CONSULTING ENGINEER,
Has had Five Years' Experience in Examining Mines in Colorado, Arizona,
New Mexico, and Nevada, U.S.A.
Advice as to the kind of Machinery necessary to work particular ores given.
ADDRESS—11, QUEEN VICTORIA STREET.

MR. ALEXANDER DAVIDSON,
STOCK AND SHARE DEALER,
LEADENHALL HOUSE, 101, LEADENHALL STREET, LONDON, E.C.
FOR SALE, OR OFFERS CAN BE MADE FOR THE FOLLOWING SHARES:—
* THESE ARE CHEAP SHARES, WORTH BUYING FOR A GOOD RISE.
120 Bedford United. 70 Gunnislake (Clitters). 45 Roman Gravels.
*100 Bratsberg, £1 15s. *100 Herodfoot, 4s. 150 Sortridge, 6s. 6d.
75 Canada Gold, 9s. 40 Killifreth. 100 South-East Wynaad
20 Devon Great Consols. 120 Mounts Bay. 130 Tankerville.
350 Devon Friendship. 150 Parys Mountain. 30 Van
200 Drakewalls, 9s. 200 Prince of Wales. 70 Wheal Crebor.
*200 East Blue Hills. 60 Richmond. 120 West Devon.
Shares wanted in the following mines:—
200 West Caradon, 100 La Plata, 150 East Caradon.
90 Organos Gold, 120 Orita Gold, 200 East Wheal Rose.
110 Old Shepherds, 300 West Crebor, 120 Treavean.
N.B.—Sellers must state number and lowest price.

NOTE.—MR. A. DAVIDSON is in a position to BUY and SELL at the closest
dealing prices of the hour; also to advise country shareholders what to Buy,
when to Sell, and what to Avoid.

HORACE J. TAYLOR, STOCK AND MINING SHARE
DEALER, 38, GREAT ST. HELEN'S, BISHOPSGATE STREET,
LONDON, E.C.

Offers FOR SALE the undermentioned, all or part, at annexed prices:—
200 Bwlch United, 12s. 6d. 50 East Craven Moor, 10s. 200 Silver Hill, 11s.
80 Cootacovill, 15s. 80 Langford, 10s. 6d. 200 West Lisburne, 13s. 6d.
300 Chionates, 2s. 6d. 50 New W. Caradon, 10s. 200 West Devon, 10s.
100 Devon Friendship, 8s. 100 Parys Copper, 8s. 6d. 100 West Crebor, 9s. 6d.
40 East Blue Hills, 10s. 100 Prince of Wales, 11s. 6d. 50 Wheal Crebor.
30 S. Devon United, 15s. 3

MONA CONSOLS (Limited), a strongly recommended. See annual report of
Capt. Bowden, stating that if he was in a position to put his money into mining,
Mona Consols would be the property, and he would consider he was amply re-
paid, and if the mine was in Cornwall or Devon, and showed such prospects at
shallow depths, it would cause the greatest excitement in the mining market.
BANKERS: THE CENTRAL BANK OF LONDON.

MR. W. MARLBOROUGH, STOCK AND SHARE DEALER,
29, BISHOPSGATE STREET, LONDON, E.C. (Established 30 Years)
Can SELL the following SHARES at prices annexed:—
25 Bedford Unit., £1 18 9 25 Gunnislake (Clitters), 50 Prince of Wales, 13s.
30 Bratsberg Cop., £2 2 6 50 Herodfoot, 3s. 9d. 50 Parys Copper, 9s.
50 Bwlch United, 15s. 3d. 50 Killifreth, 3s. 9d. 10 Richmond, £8 6s. 3d.
150 Colombian Gold, 17s. 6d. 50 Kapanga, 17s. 6d. 20 Rully, £2 2s. 6d.
40 Chille Gold, 19s. 20 Leadhills, £1 13s. 9d. 25 South Devon, 17s. 6d.
125 Corporation of South 40 La Plata, £2 2s. 6d. 100 Sortridge Con., 6s. 6d.
Australian Copper, 50 Mona Consols, 23s. 50 Tai kerville, 6s. 9d.
21s. 3d. 40 Mounts Bay, 17s. 40 Treavean, 22s. 6d.
50 Dev. Friendship, 8s. 6d. 25 Marke Valley, 20s. 20 Tolima A.
200 Don Pedro, 3s. 6d. 25 North Blue Hills, 4s. 90 West Crebor, 10s. 6d.
50 East Blue Hills, 10s. 3d. 100 Nouveau Monde, 9s. 25 West Lisburne, 16s. 6d.
50 East Rose, 22s. 6d. 50 New W. Caradon, 10s. 6d. 40 West Devon, 11s.
23 East Caradon, £2 3s. 9d. 20 Organos Gold, £2 3s. 9d. 25 West Caradon, 23s. 9d.
25 Frontoine, £2 12s. 6d. 25 Old Shepherds, 22s. 6d. 25 Wheal Crebor, £2 8 9
10 Great Lacey, £17 3 4 25 Orita, fully pd., £1 5s. 25 Western Andes Gold.

MONA CONSOLS.—A good discovery reported in this mine. A limited
number of shares can be dealt in.
COLOMBIAN GOLD MINES.—Monthly profits by last returns: Tolima,
£4500; Colombian, £390; Western Andes, £750. These shares are highly recom-
mended for a certain and great rise.

5 shares in Home, Foreign, and Colonial mines, bought and sold at net market
prices, free of commission.
Put shares for forward delivery at special prices on receipt of deposit of 20 per
cent.

SPECIAL BUSINESS IN TAMAR SILVER-LEAD either as Buyer or Seller,
BANKERS: ALLIANCE BANK (Limited).

MESSRS. WRENN AND CO., STOCK AND SHARE
BROKERS, 13, CROSBY HALL CHAMBERS, LONDON, E.C.
British, foreign, and colonial stocks and shares dealt in at net market prices
for cash or account.
Strongly recommended—Mona Consols. See reports on this promising mine
in this day's *Journal*. Price and full particulars on application.
BANKERS: ROYAL EXCHANGE BANK.

MESSRS. J. TAYLOR AND CO.,
MINING ENGINEERS AND INSPECTORS,
86, LONDON WALL, LONDON, E.C.,
Have Agents in the various Mining Districts of Great Britain, the Continent,
Australia, and the United States of America.
Inspections undertaken, either personally or by our Agents, and Reports
Advice as to Working given.

MESSRS. ABBOTT AND WICKETT,
STOCK AND SHARE BROKERS, REDRUTH
ORDERS BY TELEGRAM PROMPTLY EXECUTED.

ESTABLISHED 1863.
MESSRS. CUNLIFFE, ENTWISLE AND CO.,
FINANCIALISTS,
MINING AND CONSULTING ENGINEERS,
MINERAL ASSAYERS,
STOCK AND SHARE BROKERS,
77, BLOOMSBURY, OXFORD STREET; AND 2, UPPER BROOK STREET,
MANCHESTER.
Bankers: Manchester and Oldham Bank (Limited),
Pall Mall, Manchester.

THE MINING RECORD, Only \$5.00 a year,
Foreign Postage.
61, BROADWAY, NEW YORK.
Is the ONLY PAPER in the United States that gives FULL LATEST ACCOUNT
from all the GREAT GOLD, SILVER, IRON, and COAL MINES of AMERICA.
ORDERS EXECUTED FOR MINING STOCKS. Information free
ALEX. ROBT. CHISOLM, Proprietor.
London Office—H. CARTER, Manager, 26, King William street London.

Notices to Correspondents

* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

Received.—"Shareholder" (Simon's Reef)—"J. R. P. (Paris)"—"T. R. C." (Dorchester)—"W. T." (Cork)—"C. C." (Upper Clapton)—"J. C." (Widnes)—"J. H. P." (Dublin)—"Shareholder" (New York, Pennsylvania and Ohio Railroad Company) should address his complaint to the London office. We could not publish such a long recital of grievances—"W. M." (Glasgow)—"D. P." (Chicago)—"F. S." (Indianapolis)—"J. T." (Redruth)—"A. G." (Glasgow): We could not publish the letter respecting the Norway Copper Mines Company without the writer's name being attached.

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, NOVEMBER 11, 1882.

THE COLLIERY EXPLOSION IN DERBYSHIRE.

For several months past there has been an unusual immunity from explosions of gas in coal mines involving loss of life. But now there has been a change in the opposite direction, which it is to be hoped will not extend, as has been so frequently the case, especially during the last quarter of the year, when more than at other times we are subjected to sudden atmospheric changes. This time the explosion took place on Tuesday morning, at one of the pits belonging to the Clay Cross Company, and situate about four miles from Chesterfield. Some of the seams of coal worked in Derbyshire give off a great deal of gas, but owing to good management and strict supervision on the part of the officials the county has been singularly free from serious disasters from explosions; but it frequently happens that such occurrences take place in districts where they are least expected, showing how necessary it is that at all mines every precaution should be taken, so as to be able to overpower any sudden outburst or accumulation of gas, by the superabundance of ventilation going through the workings. The mines belonging to the Clay Cross Company are amongst the most extensive in the kingdom, and none we believe are better managed, or have the advantage of superior systems of ventilation or of working; yet with all these advantages an explosion took place resulting in the loss of more than forty lives. There are, of course, several ways in which such an occurrence might take place; but in any case there must have been a light and an explosive mixture of gas and air. But with the limited information already given, and the works not having been explored, it would be unfair as well as premature to even hazard an opinion as to the probable cause of the explosion; but with respect to this we may have more to say hereafter when we have fuller information before us. Fortunately, it may be said, when the explosion took place not more than one-fifth of the men usually employed in the mine were at work, otherwise the catastrophe would have been far more serious than it was. After the explosion an exploring party was formed; but on getting to the bottom of the shaft they were met in all directions by the poisonous fumes of the deadly after-damp, or carbonic acid, which not only prevented the works being penetrated to any distance, but completely overpowered several members of the party, who had to be drawn to the surface in a prostrate state.

Ultimately and with great trouble the seat of the explosion was reached, when it was found that all the men who had been working in its vicinity were dead, whilst several who were close to the shaft bottom were most seriously burnt. In all these terrible calamities with which we are so frequently visited there are certain things brought to light which might be taken advantage of so as to greatly facilitate the reaching of the dead and injured. It has been clearly shown that there are certain appliances that could be brought into requisition by which the fire-damp could be gone through with comparative ease, the dead and injured recovered, and where there was a fire, as so frequently happens after an explosion, the most effectual means could be taken for extinguishing it or for preventing it from spreading. Such an apparatus, for instance, as that invented by Mr. FLEUSS, which can be used either under water or in a mixture however explosive it may be. His method is not a secret for it has been patented, and on several occasions it has been tested in mines as well as in specially prepared mixtures. By the system, what may be termed compressed oxygen, is taken into a mine to supply the place of that which is breathed.

This is one of the great essentials, seeing that in every breath we draw we take in a certain amount of oxygen, but about four times as much nitrogen, so that a little of the oxygen becomes fixed in the form of carbonic acid, so that the air cannot be breathed. But with a fresh supply of oxygen to replace that which has been absorbed, the air becomes fit for breathing in. By means of the compressed oxygen Mr. FLEUSS has been able to go into an atmosphere, and remain in it for some hours, which was principally composed of carbonated hydrogen and carbonic acid. In the helmet, as well as in some portions of his armour, there are places for fresh air, and this is frequently renewed by the oxygen he carries, and which can be regulated by means of a tap. The invention appears to be a most valuable one, and, we are told, can be easily applied. As we have before stated, it is on the occasions of these death-dealing explosions that we see the necessity for such appliances as we have briefly alluded to, and there does not appear to be any reason why the apparatus should not be considered a requisite at all the coal mines in which gas is known to be given off, more especially as it is not a costly article, whilst it can be easily put out and worked by any ordinary workman.

THE SALT INDUSTRY OF CLEVELAND.

We last week drew attention to the new industry that was about to be initiated in the Cleveland district by Messrs. Bolckow, Vaughan, and Co., and we now find that operations have just been commenced. It may be recollected that a few years ago Messrs. MATHER and PLATT, of Salford, were engaged by the firm of Bolckow and Vaughan to bore for water, and in doing so they came upon some rock salt. The bore-hole was of large size, and commenced in a pit about 90 yards, from which depth the hole at the upper part was 22 in. in diameter, and the lower part 18 in. The strata brought up were such as to leave no doubt whatever that the rock-salt was then proved. The strata in the bore-hole was—Drift, 70 ft.; upper red marls with gypsum, 89 ft.; red sandstone, 900 ft.; ditto, with saliferous marls, &c., 147 ft.; rock-salt, 100 ft.; saliferous marls mixed with salt, 7 ft.; total, 1313 ft. No rock-salt appears to have been met with in the upper red marls in the bore-hole, but only gypsum, which are the usual accompaniments of rock salt. It is, therefore, evident that there is a very large area of rock-salt in the Cleveland district and in the immediate neighbourhood of Middlesbrough. However, having proved the existence of the rock-salt, the company appears now to be determined to develop it, and that on an extensive scale. During the present week Messrs. MATHER and PLATT have been engaged with a number of men in putting down the necessary appliances in connection with their own well-known boring apparatus. The bore-hole is to be 28 in. in diameter, and the work will be resumed at the same place where the first boring we have alluded to was made, but the depth will be greater by nearly 300 ft., as at the greater depth it is expected that the salt will be found free from the marls and other accompanying deposits, so that the brine will be pumped up nearly pure. Messrs. MATHER and PLATT, who have had a good deal to do with the salt mines in Chester, give it as their opinion that the deposits of Middlesbrough, as regards quality are fully equal, at least to those of Northwich. It is said that Messrs. Bolckow, Vaughan, and Co. purpose putting down an extensive plant for the converting of the brine into salt, for which there is an excellent market in the Newcastle district. Messrs. Bell Brothers, of the Port Clarence Works are also about to open out at the point

where they have tapped the salt, and Messrs. Althusen, of the Newcastle Chemical Works, and who work up nearly 1000 tons of salt weekly, are also about to open out at Cowpen Bewley, where the thickness of the beds in the district are said to be upwards of 100 ft. It will be seen that the new industry is now being commenced in earnest, and of its success there appears to be no question.

THE DEVELOPMENT OF SOUTH WALES.

THE RHONDDA AND SWANSEA BAY RAILWAY SCHEME.

The prospectus of the Rhondda and Swansea Bay Railway Company is now before the public, and already it has created a most favourable impression, and received a considerable measure of support from the mining and commercial community. The great object of the scheme is to bring the far-famed and only partially developed coal field of the Rhondda Valley into direct and unbroken communication with the rapidly rising and important seaports of Swansea, Neath, Port Talbot, and Briton Ferry. In doing this it will provide other sea outlets for the practically inexhaustible supply of steam coal of the Rhondda and Avon Valleys, and traversing an immense maiden mineral basin will open up vast deposits of bituminous coal, so urgently required for the ironworks, zincworks, tin-plate works, and other metallurgical industries which stud the whole district, but principally those of Swansea, Landore, Neath, &c. The value of the proposed line as a commercial speculation may be pretty well gauged from the fierce and determined opposition it received through its Parliamentary stages at the hands of the Taff Vale Railway Company. That company at once perceived its monopoly of the immense traffic of the Rhondda Valley coal district would be broken by the proposed line to Swansea, and its 18 per cent. dividends likely to be interfered with. They fought with a pertinacity worthy of a better cause, but it was useless. They could not adequately develop the district themselves, yet they endeavoured to prevent others from assisting. Many of the most important colliery proprietors, iron-makers, tin-plate manufacturers, merchants, and shippers voluntarily came forward as witnesses for the new line, demonstrating the fact that Cardiff, however spacious its dock accommodation, is insufficient for the rapid shipment of the coal; whilst the metal manufacturers showed that they would be vastly benefited by having a direct, and, consequently, far cheaper supply of the coal from the Rhondda and Avon Valleys, so essential for their works. Fortunately, this evidence was unanswerable, and the promoters' Bill received Parliamentary sanction—the fact being the occasion of much public demonstration throughout the whole of the localities more immediately concerned.

The mining and commercial development of South Wales during the past 50 years has been as pronounced as any part of the kingdom, and Swansea and its adjacent districts have advanced equally rapid as any part of Wales. The manufacturing and commercial industries, however, have had their seasons of activity and depression. For the past seven years there has not been great commercial prosperity—our great mining and metal industries have been depressed. A new epoch has, however, dawned, and there are signs of revival and returning activity in all directions. The Rhondda and Swansea Bay Railway will unquestionably be one of the principal means by which this revival will be quickened. Fortunately, Swansea is prepared for any increased coal traffic which can be brought down over the new route from the great Rhondda and Avon coal fields. Last year the Prince of Wales Dock was opened at Swansea by their Royal Highnesses, which dock not only doubled the entire dock area of the port, but provided the deep water facilities for the large ocean-going steamers so urgently required.

Some 10 or 12 years ago an official survey of the South Wales coal field was made by means of a Royal Commission, consisting of Mr. (now Sir) H. Hussey Vivian, M.P. for Glamorgan; Geo. T. Clarke, of Merthyr; and Mr. Evan Daniel, C.E., of Swansea—and after a most exhaustive enquiry these gentlemen reported that the superficial area of the South Wales coal basin was 906 square miles; greatest thickness of the strata known as the coal measures 10,000 to 12,000 ft.; number of coal seams not less than 2 ft. 25, which contain a thickness of about 84 ft. of workable coal. The total quantity of coal in the basin was returned by the Commissioners in round figures at 36,566,000,000 tons. After making necessary deductions it is estimated there remains of workable coal, within 4000 ft. of the surface, 31,783,000,000 tons. Calculating at the then rate of consumption (in 1870)—13,664,112 tons per annum, this coal supply of South Wales will last 2300 years. Whilst, then, at one end of the proposed new line of railway we have this immense coal field (much of it untapped for want of communication), let us see what there is at the other end, and what are the prospects of the undertaking as a commercial speculation. The line will run from the Rhondda Valley through the Avon Valley to the ports of Swansea, Neath, Port Talbot, and Briton Ferry, in each of which ports spacious docks exist, with all necessary drops and facilities for the most extensive shipments. Swansea has been justly termed the centre of the metallurgical industries of the whole kingdom, and probably within a radius of 10 miles there are a larger number of smelting-works, iron and steel works, tin-plate works, &c., than in any other place, not only in the United Kingdom, but in the whole world. Prof. Phillips once wrote in reference to the copper trade that of the entire make in Great Britain fully nine-tenths is smelted in the Swansea district, and the remark holds good to-day. Within a radius of 20 miles of the town there are no less than 38 ironworks, whilst the celebrated Landore Steel Works (Messrs. Siemens and Co.) are amongst the largest and most scientifically arranged in the kingdom; and Sir John Jones Jenkins, M.P., has also recently erected new steel works near Carmarthen. There are a large number of patent fuel works in the immediate district, the exports from the port being nearly 200,000 tons per annum. There are 550 collieries within a radius of 40 miles of the port, the exports of coal bordering upon a million tons per annum. Swansea is also the principal seat of the tin-plate trade of the whole kingdom, having nine of the largest works extant within a radius of three miles of the post-office, these having an aggregate of 40 mills (some being the largest of the kind in the world), and capable of turning out a total of 29,000 boxes of finished tin-plates weekly, or about a million boxes annually, which is about one-third of the total exports of the whole country. We need hardly say that with such a vast number of important works, employing many thousands of hands, several millions of tons of coal are consumed by them, and the new line will act as a most important and direct feeder, as the bituminous coal basin traversed by the proposed route will be developed, and large areas now unworked brought over the line to the seat of these works.

We have said that in all probability South Wales generally, but the more western part of the county especially, is on the eve of another of those commercial epochs which occasionally take place. Swansea and its districts have progressed in spite of a variety of most adverse circumstances, or rather its circuitous access with the great steam coal basin of the Rhondda Valley has militated most seriously against its commercial prosperity. At present the distance is no less than 42 miles, but which will be reduced to 15 miles by the proposed line; from Treberbert from 54 to 25 miles, and thus more than 50 per cent. will be saved in time and money. When the line is completed Swansea will be placed at about the same distance from the Rhondda basin as Cardiff is at present; but the favourable geographical position of Swansea (being 60 miles nearer the sea) will unquestionably rapidly augment its coal shipments, more especially those by large ocean-going steamboats, for the express accommodation of which the new deep water docks of 26 acres has been created and equipped by the Harbour Trustees.

Having thus rapidly glanced at the important mineral district, the large number of important metallurgical works, and the docks—all of which will be served by the proposed Rhondda and Swansea Bay line—we can only say that so far as the future can be gauged by the past and all surrounding circumstances, we can have no possible hesitation in recommending the line as a safe and profitable commercial speculation. The Taff Vale line has for many years past paid its fortunate shareholders from 15 to 18 per cent. dividend, and the Rhymney line pays its 12 per cent.; but neither of these lines are surrounded with such favourable circumstances as the Rhondda. The great increase in the output of the Rhondda Valley in the future will be to the west—Swansea lies westward 60 miles nearer the sea than

Cardiff, and the dangers and delays of the intricate channel voyage are obviated, whilst there are no metal works in Cardiff requiring coal. We have said nothing of the large passenger traffic which will take place over the new line during the summer excursion months, as we believe the mineral traffic alone will be sufficient to pay a dividend equal to at least 10 or 12 per cent. and probably 15 per cent. in a few years. One most favourable feature is that the new line commands the confidence and support of the principal manufacturers and merchants of Swansea and district. The directors are—the Earl of Jersey (Chairman); Sir John Jones Jenkins, M.P. for Llanelli (deputy-Chairman); Sir H. H. Vivian, M.P. for Glamorganshire; Charles Bath, Esq., director of the Glamorgan Bank; Thomas Cory (Cory, Yeo, and Co., colliery proprietors), Swansea and London; Thomas Davies Daniel, tin-plate manufacturer, Aberavon; John Richardson Francis (firm of Richardson and Co.), Swansea and London; and Morgan B. Williams, Chairman of the Swansea Bank. The high commercial status of each and all of these gentlemen is a guarantee of the bona fide nature of the proposed line. It is no bogus company, and no sea-bubble speculation. Its object is the development and expansion of large mineral deposits, bringing them down for shipment to the important and rapidly rising seaport of Swansea, and feeding the hundreds of large iron, steel, tin-plate, and other manufactures in that district, and as such it must shortly become one of the most important mineral lines in the kingdom, and will probably rival the Taff Vale in its 15 and 18 per cent. dividends.

SYSTEMS OF WORKING LEAD MINES, &c.

[FROM A CORRESPONDENT.]

It appears that lead mining, more especially in the North of England, is not in so satisfactory a state as could be desired, so far at least as the workmen are concerned. Mr. W. BEAUMONT, it is stated, has handed over the Weardale Mines to a company, the royalties having been reduced by the Ecclesiastical Commissioners. The Weardale Mines, it may be said, were held by Mr. BEAUMONT at an annual rent of 4600*l.*, but this has been considerably lessened. What, however, appears to have been, and probably is still, the great defect is the system of working, by which a man may earn by chance good wages, or, perhaps, scarcely any at all. Advances were made to the miners to the extent of about 3*l.* for a month, with which the men went into the hills prospecting for a vein, and, if found, they worked, and according to its richness in metal they were paid—so much per ping of 64 stones. But, more recently, the men had to discover a vein and begin working it before they could draw any money. It may be needless to state that such systems cannot be expected to work satisfactorily, seeing that a miner with a family could never depend upon receiving a certain or approximate amount of wages. Still the men, long accustomed to go out into the high grounds prospecting, prefer it, provided they receive the lent money they have long been accustomed to, although the average remuneration is considerably less than what is paid to an ordinary labourer at a coal mine. But it is certainly not so good as was the practice a couple of centuries ago, when, singular as it may appear, the same system is now being advocated in connection with all mines—that of a sliding scale. From Mr. W. M. EGGLESTONE'S recent work on "Stanhope and its Neighbourhood" we are told that the Moor Master let and set by deed unto four men, "to search for lead in the mine called Lodge Field Slit, from the floor of the slit south-west to ye to the head of the slit north-east, and 100 yards upon the new unwrought ground, the conditions being that the takers should pay to the Moor Master in clean, well-washed and dressed ore, also the other eight parts, at the price of twenty shillings a binglode, when lead sells at Newcastle at ten pounds the fother, and to increase or decrease two shillings in every binglode as the price of lead by the fother did rise or fall every twenty shillings at Newcastle." To our thinking this system is a fair one, and well suited to the present time. In one or two respects it is similar to the Derbyshire custom, where the miners can enter and open out certain ground without the consent of the owners. But this mode has not worked at all well, for a great many mines have been opened out in Castleton, the Peak, Wirksworth, and other districts that were shortly afterwards abandoned, as men without capital could not make so much money as those who worked for mineowners at defined wages.

At Alston Moor, in Cumberland, the miners work in partnership, raising the ore at a certain price, and generally work in eight hours' shifts. Arrangements in some instances are made at the surface by which the men can remain for a shift without going to their homes, some of which are a considerable distance from the mines. With respect to the prospecting in search of ore at Alston Moor there does not appear to be much difference, as in other districts, where it is expected that a lode or lodes is likely to be found, permission to search is asked from the lord of the manor, who in his own interest, as a rule, may be expected to respond willingly to such an application. From the hill side, where the ore is expected to be met with, a level is driven in the direction where the vein is supposed to be sufficiently high to admit of the conveyance by horse-power or otherwise of the strata that has to be removed. Rails are then put down, and trams brought into operation to carry away the stuff. The men then drive on straight below the first stratum until a vein is reached, which is then followed up by means of rises and drifts, the latter being generally about 6 ft. in height and about 3 ft. in width. "If the vein in the first instance is sufficiently rich it is worked in the usual manner, but if poor the drift is continued downwards until a better and richer vein is met with. In the best appointed mines the ore is raised by drawing-engines, which also supply the motive power for other purposes as well. But the important work may really be said to commence at the surface when the ore has been drawn up, and has to pass through several stages prior to going into the furnace. In the North the usual plan is to gather the ore at the top, and then divide it according to its quality and place it in heaps. Some of it is found to be free from all earthy and other impurities, and without much further trouble is ready for smelting. But in others in which there is clay and other material connected with the ore, the latter is at once crushed and washed, so that little is left but the pure metal itself. The washing process is performed by means of jiggers, consisting of sieves of different degrees of fineness, and through these the ore is passed from one to the other until the ore comes out in a comparatively pure and powdered state. The ore being thus prepared is ready for smelting, or nearly so at least, for it is to some extent calcined so as to free it from sulphur, which appears to have an affinity for most ores, and one that at times causes a good deal of trouble. But when free from such impurity it is taken and mixed with lime and small coal as a flux, and put into the furnaces and left until it is completely smelted. It is then run off and taken off to the purifiers and crystallised; the lead that is known to contain a certain proportion of silver is at once removed to a furnace specially constructed for the purpose, when the silver is extracted and kept apart from the other products.

In the North the principal smelting-works are those of Mr. W. B. BEAUMONT, at Allendale, Alston Moor, where there is an immense horizontal chimney stack, from which the deposits of lead caused by the fumes can be extracted, instead of being wasted, as was the case formerly. There are also the works of the Governor and Company of Lead Smelters, Nenthead, Alston Moor. At the latter there is produced a well-known chemical, litharge, frequently used as a depilatory, and is extensively purchased by chemists and druggists. The quantity of silver obtained from lead ores varies a good deal in different districts. In Northumberland and Durham it is about 12 ozs. to the ton of ore, in Cumberland 13 ozs., Westmoreland 12 ozs., whilst in the Isle of Man it is fully 20 ozs., the richest of the ores raised in the kingdom in which silver is found. The lead itself is found as galena or as a carbonate, the former the most plentiful, being found in fissures; the small ones, which are on the level of strata, being known to the miners as strings, whilst those which are large, and rise or fall with the adjoining strata, are known as veins. In addition to the lead ore, barytes, or barium sulphate, now largely obtained for the purpose of converting into white paint, and so superseding the deadly white lead, is found at the mines of Fallowfield, Settling Stones, and Stonecroft, in Northumberland and Durham, and at Blaghill, Clargill, and Force Crag, in Cumberland. In addition,

there is fluor-spar in all colours, green, pink, violet, red, &c. Iron and copper ore have been found in connection, or at least at no great distance from the lead, but not in sufficient quantities to be profitably worked. But it is no unusual thing to find ironstone immediately connected with veins of lead. In Cornwall, for instance, there are deposits of sphatose ore that are believed to be the "backs" respectively of lead and copper lodes rather than indications of greater deposits below. The Allendale and Weardale Mines have been the most productive in the kingdom, and under the new arrangements it is to be hoped that they will be again in that position, finding plenty of employment for the miners that have so long been connected with them. In Cumberland the Governor and Company of Lead Smelters produce about one-half of all the lead ore that is raised in that county, but there is every reason to believe that the production in it will be greater than it has been hitherto when lead mining has become more profitable than it has been for some considerable time past.

THE PARAFFIN OIL TRADE.

There is not in the United Kingdom a trade that has successfully passed through such extreme vicissitudes as the mineral oil trade of Scotland, which under the most adverse circumstances has been a very remunerative business. Petroleum, the great competitor of paraffin oil, has from excessive production reached a climax recently in not realising cost price on this side of the Atlantic, though the cost was reduced to a minimum by the enormous flow of recent wells. Improved distillation of shale, with careful refining, has resulted in an increased yield of superior products at less cost than formerly, while the improvement is especially marked in the more valuable productions.

The most recent improvement, and, perhaps the most important yet invented, is that of Messrs. Young and Beilby, which is being adopted by the Clippens, Oakbank, and other oil companies, by which the profits will be augmented by increasing the production of ammonia from the shale 150 per cent., besides a further invention, which will make considerable profit from the fuel used, which until now constituted a serious charge to the cost of manufacture. It is a lucky coincidence that at the very time when the trade is about to increase the advantage it has gained over the Americans, and adding to the already large profits, we learn from reliable sources that the long looked-for decline in the production of petroleum is showing itself with unexpected suddenness, so that the pluck, energy, and skill of the Scotchmen are about to be rewarded by profits likely to exceed the most sanguine expectations of the shareholders.

Paraffin oil, long inferior in many ways to petroleum, has of late become superior in almost every respect, through improved manufacture in the former instance, and from deterioration, owing to natural causes in the latter. The price realised for paraffin oil by the makers at their works, exclusive of casks and charges, has recently been reduced below 3d. per gallon, or about one-tenth of the highest price touched within the last six years, and at least one-third of what would be considered reasonable. At present the value is about 5d. under similar circumstances; but unfortunately for the manufacturers most of them are contracted for the winter season at the low prices, and consequently are unable to derive any immediate benefit from enhanced values, except for a small surplus. Paraffin from which candles are made has had its ups and downs, and has for some time also suffered from extreme depression, being so cheap that tallow could not compete with it, while the consumption increased so largely that the value has risen 50 per cent., an improvement in a few months equal to 100,000% to the six principal companies, and the article has been permanently placed on a sounder basis, showing every signs of further advance.

Lubricating oil has been much improved in quality, and is a product of considerable importance, also improving in sympathy with burning oil and paraffin. Ammonia, through increased production, is likely to drop a little in value, but even a very slight reduction will be followed by an enormous addition to the consumption, which will be practically inexhaustible, owing to its great value to the farmer, and the decline in the quantity and quality of guano at present known to exist. The inventions of Messrs. Young and Beilby will more than compensate for any possible reduction in value of ammonia; while the inevitable fall in sulphur will favour the oil manufacturer in the refinery as well as in the ammonia department.

THE PROPOSED SHIP CANAL FROM MANCHESTER TO LIVERPOOL, AND THE YORKSHIRE MINING FIELD.

The scheme for making a ship canal from Manchester to Liverpool has already received a large amount of support from the most influential merchants and manufacturers of Lancashire and Cheshire, and there is now no doubt that the Parliamentary fund of 100,000% will be raised. At a meeting held at Manchester, on Friday last, the Chairman, Mr. DANIEL ADAMSON, the well-known metallurgist and manufacturer, pointed out the benefits that would be derived from having water communication of such a character between Liverpool and Manchester, that the largest ocean-going vessels could come to the latter; and so hearty indeed is he in the cause that he also declared that if his own countrymen would not co-operate with him he would go to France and ask M. DE LESSEPS to carry out the project. But we feel sure that there will be no necessity to go outside the county of Lancaster itself to find the money for carrying out a scheme that would be of such immense value, not only to Manchester, but to the districts many miles away from it. It was the Glasgow capitalists in particular that were instrumental in connecting Greenock and Glasgow by means of the Clyde, and if such could be done in Scotland surely as much at least might be expected from wealthy Lancashire. But of the districts at some distance from Manchester none in all probability would be more benefited than the West Riding mining field. On this point Mr. ADAMSON said, among the benefits it would confer on the local trade was the trade that would come from the Yorkshire coal field over the canal, so that the Yorkshiremen would welcome any scheme which afforded additional outlets for their productions, and there could be no doubt the canal would do a great deal for them. South Yorkshire, we may say, contains beds of steam coal extending over vast areas, and of a quality that cannot be excelled. Being of a very hard character, it is more suitable than any other for shipping for long voyages, seeing that owing to its non-liability to break, the gas does not ooze out the same as it does from a softer description of coal, yet owing to the position of the field, and its distance from any sea port, comparatively little of it is sent away for the use of steam vessels or for exportation. Barnsley and Wombwell may be considered as the centres of the field in which the finest steam coal is to be found, but these are 66½ miles and 62½ miles respectively from Grimsby Docks, 45 and 49 from Hull, and 76 and 72 from Liverpool.

In addition to this, the South Yorkshire district is wedged in between two others which are nearer than it to good markets. West Yorkshire, which includes Normanton, is nearer to Hull, and has consequently a lower rate to that port. On the other side Derbyshire is much nearer to the Metropolis, and has a rate there lower by 1s. 4d. per ton than from any port of the West Riding. But these disadvantages would be more than counterbalanced were Manchester to become a port of shipment. The coal raised in West Lancashire is amongst the best for gas and household purposes, but is by no means well adapted for steam. As it is, therefore, many ships leave London and Liverpool in ballast to take in coal at Newcastle, Cardiff, or Newport. But this would be obviated by the proposed canal, for the coal would be taken from South Yorkshire to Manchester by the Manchester, Sheffield, and Lincolnshire Railway at a moderate cost, as the distance would only be about 36 miles. As the coal, too, is all that could be desired, it would sell readily from the bunkers of the vessels trading to and from Manchester, as well as those more directly connected with the Port of Liverpool. Of the quantity required for the use of steamers, it appears that last year it amounted for those alone trading to foreign countries to 5,227,588 tons, whilst there would be also a large quantity taken by our coasting vessels. It has also been stated recently by a gentleman long connected with the coal trade that the fine steam coal of Newcastle is fast becoming exhausted, and that some 20 or 30 years at most in all probability

will see the end of it. Such being the case, the practically inexhaustible field of South Yorkshire in which there are many square miles of steam coal as yet untouched, and not even sunk to, must become the principal one in England, and the one in which the requirements made will be the greatest. The Yorkshire field is much larger than those of Northumberland and Durham, whilst its annual output stands next to the two combined, being considerably in excess of that of the entire of South Wales. But with the facilities that the proposed port would give to the southern portion, extending for some four or five miles beyond Barnsley, it would soon take the lead as the greatest producer in the kingdom. The shareholders of the Manchester, Sheffield, and Lincolnshire Railway, although they have a port of their own—that of Grimsby—would soon find that they had a more valuable one at Manchester, owing to its proximity to the South Yorkshire coal field, from which in all probability the traffic in coal would amount to many thousands of tons weekly; Manchester, in fact, would become the nearest seaport to the largest coal field in England, and with the largest undeveloped area of coal of any. A few years since coal was sent to Liverpool from the West Riding for the use of steamers, but owing to the railway rate for such a long distance it was found not to pay. But all this would be altered by Manchester becoming a port for shipment for coal that would only have to be carried from 30 to 40 miles by railway. The project, it need scarcely be said, is meeting with the warmest support from mine owners as well as the iron and steel manufacturers in the southern part of the West Riding, including Sheffield, Rotherham, Barnsley, and Penistone, all of which would be immensely benefited by it.

COAL IN COLORADO.

The existence is reported in Gunnison County, Colorado, of a bed of coal 30 ft. thick, covering in one place 1600 acres. The coal deposit is situated on a small stream, tributary to the Uncompahgre, about eight miles north-west from the Las Pinos Indian agency and 176 miles south-west from Denver. The coal crops out along the mountain side about 80 ft. above the plain, and where it has been exposed it shows a thickness of 30 ft. of solid coal. The coal is said to be semi-bituminous, and is of a jet black colour. It has been analysed by Prof. WUTH, of Pittsburg, Pennsylvania, and has been pronounced by him to be of an excellent quality. It is almost entirely free from sulphur, and will smelt iron without coking. It has been used by the miners of the locality for the purpose of dressing their steel drills, and has been pronounced by them to be superior to charcoal for that purpose. There is no doubt, taking into consideration the thickness of the vein and the extent of the deposit, that it is one of the largest veins of coal yet opened out on the North American Continent. It is singular that the deposit occurs on the Ute Indian Reservation; it was discovered about two years since when the Indians held possession, but the prospectors who came upon it kept the matter as secret as possible until the Indians were got off the Reservation.

This discovery of coal in Colorado, coupled with other discoveries in the neighbourhood of Puget Sound, must have a powerful influence upon the material development of the great North-West of the United States. The Northern Pacific Railroad Company will be opened throughout to Puget Sound next year, and will, no doubt, assist in pouring in a great flood of life into regions in which there has hitherto been scarcely any white population. We may expect, then, to see a greatly extended development of manufacturing industry in a few years in localities in which even agriculture has scarcely yet been attempted. The infinite wealth of the infinite West has, indeed, hitherto been a sealed book even to the Americans themselves; but this is not likely to be the case much longer, and we may depend upon it that in Montana, Idaho, Colorado, and Washington Territory the earth will now be made to yield up her treasures much more rapidly and much more readily than hitherto. It will be remembered that in 1846 there were prolonged negotiations between the Governments of Great Britain and the United States with reference to the rights of the respective countries in Oregon. Although at one time the Oregon "difficulty" looked very threatening, it probably never attracted a very large amount of attention in this country. But after the lapse of nearly 40 years we shall at length have some light thrown upon the value of the territory which England then surrendered to the Great Republic. There is no doubt that immense natural resources still remain to be turned to account in Canada, and that if the British authorities make the best of the Great Dominion our wealth and influence may still be very considerable upon the North American continent. But, however this may be, there can be little doubt that when we abandoned territory in Oregon in 1846 we surrendered natural resources with the full extent and value of which we are only now about to be made acquainted. On the other hand, it may probably be remarked with equal truth that the Americans have blundered into some of the remarkable successes which they have certainly achieved. We say this, because the great West, which is now opening itself out as an attractive field for American capital and American industry, was utterly unknown to WASHINGTON, FRANKLIN, and JEFFERSON, who may be justly termed the fathers of the American Union. No doubt the States, for the independence of which WASHINGTON drew his sword 106 years since, appeared to that great patriot-general an inheritance worth contending for; but WASHINGTON knew nothing of Illinois, never heard of Minnesota, and would certainly have been puzzled to have told anyone the way to Oregon. However, it is not becoming to say anything derogatory of the reputation of GEORGE WASHINGTON because he was not fully acquainted with the wonderful resources of the vast regions of which he achieved the national independence, although the Americans since the days of WASHINGTON have done much to turn the natural resources of the United States to fuller account, a great deal more in all probability, still remains to be accomplished.

A WELSH SAFETY-LAMP INVENTION.—Considerable interest has been taken in leading Welsh mining circles of late in a safety-lamp invention which has been made public by the ingenious propounder, Mr. THOMAS THOMAS, of Ynystir, Rhondda Valley. So strong and unanimous is the confidence felt in this latest of improvements of this nature that the 10,000 men represented in the Rhondda Valley miners' organisation have voted a sum of money out of their district funds to enable the inventor to appear next week before the Royal Mines Commission. Dissatisfaction is felt with the "Musseler" because it is held that it is unsafe when inverted in the examination of the pit tops, &c. This has come to the knowledge of the Commissioners, who have accordingly requested explanatory evidence to be at once given to them on the matter. The Rhondda inventor regards all difficulty and objection as obviated in his lamp. He submits that he reduces the risk of explosion by surrounding the lamp gauze with shields to break the force of the air currents which ventilate the mines and which are liable to contain explosive gas. The new lamp is self-locking and extinguishes in the act of opening. The provisional specification gives further details, from which we gather that the first part of the invention is more especially applicable to that class of lamp known as the "Clanny" and lamps of analogous construction. Two cylindrical shields surround the gauze and are preferably arranged on the pillars of the lamp. The upper shield extends from the top of the lamp down to a point near the ring which forms the junction between the gauze and the glass; there the shield is turned at right angles and forms a partial joint with the gauze. The portion of gas which intervenes between the bottom of the shield and the ring is prevented from exposure to the velocity of the air current by a second cylindrical shield which extends upwards for that purpose from the ring; being of larger diameter it overlaps the upper shield, which protects the upper portion of the gauze in like manner. The lower shield having an open mouth, free access of air to the lamp is obtained, and the area of the top of the gas is regulated to allow of the proper exit of the products of combustion. The second part of the invention consists in forming the lock of the lamp of a small hollow box, affixed to the bottom portion of the lamp-case, and containing a catch or button to the upper side of which is fitted a horizontal spring. The spring catch (or button) extends into the lamp bottom or oil vessel; the

lamp is locked and can be opened only by a V shaped or other special form of key. The third part of the invention consists in the employment of a cylinder or tube open at each end and pierced to permit the passage of a prickler for the regulation of the wick in the usual way. This cylinder, the ends of which turn outwards in the form of flanges, is made to slide vertically over the burner, and when the lamp bottom has to be screwed home the flanges on the upper end of the cylinder come into contact with the ends of two or more arms, which are thereby made to pivot on the hinges, by which they are sufficiently secured to permit the cylinder to rise in the place where the arms resume their normal position. When the lamp bottom is unscrewed the cylinder is retained in the case, and the light is thereby extinguished as it is being withdrawn. The lower flange of the cylinder is notched to provide for the prickler. The lamp has been tested by Mr. H. Lewis, of the National Colliery; Mr. T. Griffiths, Cymmer Colliery; Mr. D. Thomas, Dinas Colliery, and other competent and experienced mine managers—all unite in commending its superior and marked excellence as an invention "for the perfect safety of underground workmen as regards ignition of gas." The inventor is a practical working collier, and to show his *bona fides* and disinterestedness he has conditionally offered to hand over the lamp and accruing profits to the workmen of the district. He lays stress on the fact that he merely aims at saving human life.

SOUTH-WEST LANCASHIRE COALOWNERS' ASSOCIATION.—The annual meeting of the association was held on Tuesday at the Queen's Hotel, Manchester. The chair was occupied by Mr. W. H. Hewlett, of the Wigan Coal and Iron Company, the retiring President, and there was a large attendance of the principal colliery proprietors of the district. Mr. C. G. Jackson, manager of the Chamber Collieries, Oldham, was elected President for the ensuing year. Mr. Waldeck explained to the meeting a scheme for constructing a new railway from Hest Bank to Ulverston across the sands, by which the railway distance between the two places would be reduced from 31 to 17 miles. Part of the scheme consisted of the reclamation of a large area of waste land now covered at high tides, and in view of the rumoured acquisition of the Furness line by the Midland Railway Company special importance was attached to the proposed scheme.

BRITISH ENTERPRISE IN COLORADO—LEADVILLE BULLION PRODUCT.

The publication of the statistics of the bullion and ore product of Leadville for the quarter ended Sept. 30 must be particularly gratifying to British capitalists interested in mining in Colorado, since not only has the return for the nine months reached the handsome amount of \$12,393,273, or over 2,500,000% sterling, but the September quarter is the largest yet, the figures being \$4,575,334, or 915,067%, the amount being made up of—lead, \$1,130,251; silver, \$1,988,142; gold, \$130,960; and ore shipped, \$1,326,111. The highest return for any single concern was that from the La Plata, whose total was \$641,677; the Arkansas Valley Smelter standing next for \$627,985; and Cummings and Finn following for \$609,870. The lowest is the Five-twenty Mill, which obtained \$1000 worth of gold. The success of the several companies appears very general.

The telluride ores of Boulder County are at present attracting considerable attention. It seems that only twice before in the history of mining has this class of ore been encountered in any quantity—in the mountains of Transylvania and in Calaveras county, California—but in neither instance in such novelty and abundance as they exist in Boulder County. The telluride belt, as at present known, is about 13 miles long by 3 miles in width, extending in a northerly direction through Gold Hill, which is 5 miles from its southerly extremity. The country rock, which is at the northern part of the belt, which is a micaceous or gneissic schist, is in the remaining portion principally gneissic granite. The slight local variations of the country rock in this belt have no observed relation to the contents of the lodes, differing in this respect from the telluride veins in Transylvania. The most noticeable variation in the character of the contents of some of the veins is the gradual partial substitution of the sulphide species for the telluride. Telluride ores contain a large proportion of gold and silver, and are, therefore, very valuable. Calaverite from the Slide Mine has yielded as much as 44 per cent. gold, while sylvanite contains about 25 per cent. gold and 12 per cent. silver, and petzite 25 per cent. gold and 40 per cent. silver.

The Slide Mine, which is at Gold Hill, has a very attractive show at the Exposition of telluride ore of almost every variety occurring in the district. The collection weighs over 3000 lbs., and includes pieces varying in size from hand specimens to lumps weighing half a ton. The latter, which are from 600 ft. below the surface, are of the usual bluish grey quartz rock, and show the width of the "pay." Native gold occurs in the telluride ores quite frequently, and many of the pieces on exhibition show it in the form of wires, lumps, and incrustations. Another Boulder County concern—the Prussian Mining and Milling Company—may be mentioned. It was organised under the laws of Colorado on Sept. 5, 1881, and has paid eight dividends since that date, aggregating \$106,500. The last dividend, amounting to \$10,500, being 7 cents a share, was payable on the 14th inst. There is a large amount of ore in sight, estimated at \$750,000. Messrs. Leach and associates deserve praise for their successful efforts in concentrating the low grade tellurium ores from the mines of this company; ores that run as low as \$12 a ton and difficult to dress are treated by them at a handsome profit. They are now building a mill with a capacity of 40 tons a day for Prussian ores alone; when completed their present 20-stamp mill will be used for custom work.

Returning to Leadville some details may be given which will be the more interesting to shareholders in the Henriett Mining and Smelting Company, whose prospectus was published in the *Mining Journal* of Sept. 30, inasmuch as the particulars are given incidentally in the Leadhill Democrat of Oct. 14 in a report connected with the Morning Star Consolidation, a neighbouring enterprise, and may therefore be regarded as quite disinterested so far as the Henriett is concerned. The writer says that descent into the mine (Morning Star) was made by the old Lower Waterloo shaft, which, at a depth of 70 ft., encountered the first seam of ore. From the foot of the old Waterloo shaft a drift connects with new shaft a short distance farther north. Around this shaft, known as the new Waterloo shaft, numerous large stopes of ore are disclosed. From an area north and west of shaft, to the Henriett line on the north, fine faces of ore are exposed on every hand. Just north of the new Lower Waterloo shaft, is the Harker shaft of the Henriett Mine, which is similarly opened by an incline from the bottom of the shaft, with levels running at right angles every 50 ft. Both in the Waterloo and Henriett Mines these lower workings radiating from the breasts of the respective inclines are at least 350 ft. below the surface. Great depth of the ore here has led to inference that another body must be located above, especially as several shafts directly over these workings show ore at a depth less than 100 ft. This upper ore body, to all appearances, is one in which the main stopes and mineral resources of the East or Upper Waterloo, and the main shafts of the Evening and Morning Star Mines draw their resources. Contact and mineral vein of the Evening and Morning Star Mines has been opened from its outcrop eastward for 1500 ft. and over. The vein of the Lower Waterloo and Henriett Mines has been explored for 600 or 700 ft., which carries developments 200 ft. eastward and beneath the outcrop of upper vein. Possibilities of a fault are, therefore, entirely precluded, and nothing short of a complete fold in limestone could re-establish levels of the two veins, and explode the otherwise irreconcilable evidence of two distinct veins, one situated several hundred feet below the other, and having a one-third greater pitch than the other. Henriett is now sinking a shaft which at 160 ft. passed through the first vein of ore, and still requires 150 ft. additional depth to connect with the ore body and incline from the Harker shaft, which develops Lower Waterloo and Henriett ore vein.

They have now begun a new shaft at Morning Star, which will pass through the first vein at about 140 ft., and is calculated to cut vein opened by Waterloo incline, 200 ft. east of the breast of the incline and at a vertical depth of 400 ft. below the surface. If ore vein opened in the Lower Waterloo workings is disclosed here in un-

diminished strength and grade, it will be a safe undertaking to sink the Upper Waterloo, Upper Henriett and other shafts still further to the east to a depth of 1000 to 1200 ft. in search of the lower horizon of pay ore. Formation the lower ore vein below is lime, and above it is a "bird's eye" or intrusive porphyry. The property shows a great deal of fine lead smelting ore. Inclines were driven on the ore bodies, and cross-cuts run every 60 feet, blocking off the entire ore resources and showing them up in fine style and to good advantage. In no part of the Henriett vein has the lime been reached, there is every prospect of other veins of pay ore being encountered in the porphyry any time until the solid lime is met with.

SECONDARY BATTERIES.

The use of carbon in conjunction with lead or compounds of lead for the electrodes of secondary batteries has been patented by Mr. DESMOND G. FITZ-GERALD, of Brixton, who constructs plates of carbon with perforations, grooves, or recesses, which are filled with lead, preferably in a state of fine division, or with any suitable compound of lead. The pores of the carbon also are filled with the same material, which in this case may more advantageously be produced by the decomposition of a salt or of an oxide of lead. Or he places the divided lead or the compound of lead within a tube or vessel of carbon, within which the compound of lead may in certain cases be heated. Such carbon tube may be perforated either in the first place, or after certain operations have been performed upon its contents. Or he employs the carbon in the form of fragments, which should be in direct contact with each other at one or more points, whilst the interstices between the fragments are filled with lead in a state of division, or with certain compounds of lead alone or in admixture with other bodies. The carbon fragments may be placed within a tube or vessel of carbon or lead perforated as aforesaid. In certain cases such fragments may be coated with lead by electrolytic deposition or otherwise. When one side of a plate of carbon is intended to constitute an anode and the opposite side a cathode, he prefers to construct the carbon plate in a compound form, i.e., he cements two plates of carbon together in such a manner as effectually to prevent any electrolytic communication between the two sides of the compound plates. Such compound plates are used to divide a trough into cells as is well understood.

Some improvements in secondary batteries or accumulators have also been patented by Mr. JAMES PITKIN, of Clerkenwell, the object of his invention being to enable a greater amount of energy to be stored in, and consequently a greater quantity of electricity to be furnished by electrodes of given dimensions, and at same time to greatly decrease the weight of the electrodes as compared with that of those formed of plates of lead as usually employed in batteries of this description. He forms the electrodes of a mass of very thin turnings or shavings of lead or strips, shreds, or pieces of lead foil or highly laminated sheets of lead in a crumpled condition packed in suitable open frames preferably of wood or ebonite, and each having a covering of felt, flannel, or other suitable porous material stretched over it on each side to retain the lead in place and allow it to be acted on by the acidulated liquid in which the electrode is immersed. The electrode thus constituted is connected with the terminals or connecting strips used for joining up the electrodes to form a battery by means of a rod of lead, one end of which is flattened and divided into a number of narrow leading strips or branches which are distributed uniformly through the mass of the electrode. When an electric current from any source is passed through two such elements connected together and immersed in acidulated water in the usual way, the one element becomes peroxidised, and when the direction of the current is reversed the other element becomes peroxidised, and the first one becomes reduced to the state of spongy metallic lead.

Another invention for the construction of secondary or storage batteries has been patented by Messrs. GROUT and JONES, of Hornsey. According to the first part of their invention they take flour, starch, or meal of any kind, and with or without other vegetable or carbonaceous substances reduced to a powder and intimately mix it or them with the oxide or salt of lead, or the oxide or salt of any other suitable metal, and add a sufficient quantity of water, syrup, oil, or other liquid to make it into a plastic mass capable of being moulded into any desired form; the moulded material can be dried or not before placing into a suitable closed vessel surrounded with powdered carbon, sand, or any other substance capable of preventing direct contact with the atmosphere. They then expose the whole to a gentle red heat for sufficient time to carbonise the organic matter with which the oxide or salt of the metal is combined, and reduce the oxide or salt to the metallic state within the pores of the carbon or charcoal, and thus obtain a very large and efficient surface for chemical action. In constructing some of the elements, and when lead is used, it is sometimes advantageous to take minium or red oxide of lead and combine it with a suitable proportion of flour and water or syrup to make a comparatively thick paste, and with a brush or spreader apply it to the surface of paper, canvas, or other material capable of being carbonised, and rolling or folding it into any desired shape before burning. When the moulded blocks or plates of whatever shape are prepared, and before burning they can have rods or slips of lead or other suitable metal inserted into the plastic material, these rods or slips being very convenient to solder the terminals or connecting wires to. If a rod or slip of lead be used the moulded carbon must be kept upright while being burned and remain so until cold. It will then become firmly attached to the metallised carbon. If the moulded block or plate is required to be of a very porous nature, the combined meal and oxide may be mixed with barm or yeast and fermented after the manner of bread and then baked and carbonised. By these means the metallised carbon becomes of a very porous and spongy nature. For some purposes they find it advantageous in the construction of these elements to employ the metallised carbon in the powdered state to surround the metal blade or other conductor. The powder for this purpose can be very conveniently prepared by adding the salt or oxide of the desired metal to powdered charcoal and exposing it in a suitably closed vessel to a reducing heat; or the oxide or salt may be added to sawdust, starch, meal, paper-pulp, or any analogous substance capable of being carbonised and of reducing the oxide or salt of the metal operated upon. The metallised carbon has such great power to rapidly absorb many times its own bulk of oxygen or other gas or gases that in certain proportions of carbon and reduced metal, when freshly burned and dry, it will spontaneously ignite if exposed to the atmosphere.

For the construction of the elements according to the second part of their invention, they take lead, in the sheet or other form, or a block or plate of carbon suitable for a conductor, and heap or pile round it, or compress upon it, lead mechanically reduced to a dusty or granular state, whereby there is an enormous surface exposed to action, and the lead dust also much more easily oxidised or "formed" than any other arrangement of the Planté secondary battery, taking only a comparatively few charges to bring it up to an efficient or working state. In the preparation of the lead dust they find it very convenient to take lead while in the molten state and add to it a proportion of any powdered substance, such as charcoal, then keep stirring or triturating it while cooling. It first becomes pasty, and afterwards, as it cools, it passes by continual stirring into a fine metallic dust suitable for the purpose described. If necessary the charcoal can be separated from the lead dust by washing.

The inventors mention that in the application of the first improvement to the construction of secondary batteries they are aware that Dr. Siemens and others have experimented on the combination of carbon and metals (notably lead) by immersing blocks of charcoal or carbon in acetate or other salts of lead, and reducing them to the metallic state in the pores of the carbon by exposing them to a red heat in a covered vessel; but the amount of metal that the carbon could by this method combine with was limited, and that principally on the surface. Their improvement consists—first, in combining a metallic oxide or salt equally within the mass of the carbonaceous substance before burning, and in any pre-arranged proportion; and, secondly, in enabling us to make it plastic for moulding into any suitable form required; and in the application of

the second improvement they claim the employment of lead dust prepared direct from the molten metal in the manner described.

PNEUMATIC PRESSURE AS MOTIVE-POWER.

The objects of the invention of Mr. GEO. V. SHEFFIELD, of New York, are to produce and maintain a vacuum in suitable vessels connected by means of pipes with a motor situated at any desired distance from the vessels, in such a manner that the motor may be operated by atmospheric pressure; also to provide a motor of special construction for utilising such pressure. He provides storage tanks from which the atmospheric air is exhausted by means of suitable air-pumps driven by any fixed power, such as a steam-engine or a water or wind-mill, and pipes connecting these pumping-engines with the said storage-tanks which pipes may be of any desired length, as for instance, the pumping apparatus, may be at Niagara Falls, and the storage tank in New York. From these storage tanks service-pipes will lead to the engine or motor where the power thus generated and stored is to be used. The air pump or exhauster by which the air is exhausted from the tank or tanks may be any suitable air-pump, either rotary or reciprocating, and it may be driven by any suitable power, but his purpose is to economise the cost of producing this vacuum by operating the pump or exhauster on a large scale so as to produce the power at the least possible expense per horse-power or by placing the said pump in some locality where natural forces such as wind or water-power may be utilised. The storage tanks are preferably constructed in cylindrical form, so as to secure the greatest economy of construction combined with the most absolute freedom from loss by leakage. They may be placed above or below the ground, but it will probably be preferable to settle them in the ground, thereby securing stability without expensive foundations. They may be made of cast-iron. These tanks or reservoirs will be attached to the pump by a pipe.

The service-pipe leads from the tank to the reservoir, and may be for a single motor, or a large or main pipe with several branches leading to several motors. The latter mode of construction is the preferable one, as it is intended to erect large works, to place the motors of different persons in connection therewith. A motor made according to his invention, and which may be advantageously used, consists chiefly of a cylinder, a rotary piston, and a valve. The atmospheric air enters the said cylinder through the opening of the valve, and striking one of the wings of the piston carries it around until the pipe leading from the tank is reached, when the air thus introduced through the valve will escape into the said pipe, and through it into the vacuum tanks, and then another portion of air will be passing through the open part of the valve, and acting on the other of the wings of the piston until the escape is reached, and so on, the operation of the motor will be repeated and continued. It is obvious that this method of utilising a vacuum may be easily applied to any suitable motor, equivalent to that above described, whether the motor be rotary or reciprocating, so long as the vacuum is utilised in combination with the normal atmospheric pressure on the other side of the piston to propel the piston forward. It is not necessary that the vacuum in the tank or tanks should be perfect, a partial vacuum being all that is required.

SEPARATING TIN FROM TIN-PLATE SCRAP, &c.

When it is desired to recover the metals which compose tin-plate it is necessary not only to separate them, but to do so in such a manner that the tin is completely removed from the iron, and that on the other hand no iron salts are found mixed with the tin salts. In the process which is employed by Mr. LOUIS BOURAU, of Paris, a cylinder made of oak is placed on two supports. This cylinder has a door which closes hermetically by means of a pressure screw. The tin-plate to be treated is introduced into this cylinder, wherein is placed a quantity of chloride of tin, that is to say, hydrochloric acid saturated with almost sufficient to fill the cylinder, then a quantity of hydrochloric acid is added sufficient to convert the tin under operation into chloride of tin, the acid being slightly in excess. A lentiform vessel where steam arrives permits the liquid to be heated during the operation.

During the working the cylinder has a rotary movement which shakes the metal on which the acid operates. When all the tin has been dissolved the chloride of tin is allowed to run off through a tap placed on the cylinder, for which care must be taken in turning properly into a reservoir placed below the cylinder. Then the cylinder is turned in such a way that the door is below which door is then opened, and all the iron resulting from the operation falls into a vessel or cart which is placed underneath the cylinder, which said cart or vessel then empties itself into a bath which contains an alkaline substance or pure water forming a sort of Irish river. This bath carries at its bottom an endless cloth, which slowly carries off the metal outwardly which falls into a cart or vessel placed at the extremity of this bath, and when said cart is full it is replaced by another, and so on. The chloride of tin thus formed may be treated by water in excess in such a manner as to transform it into oxy-chloride, which, after convenient filtration and treatment by the usual process, is mixed with charcoal, and gives by fusion chemically pure tin. The chloride of tin may also be treated by zinc and converted into chloride of zinc. The tin then put at liberty in the chloride zinc is collected and freed, either by heat or by energetic pressure, from the acid which it is mixed with, then it is melted in a convenient oven. It can afterwards be cast in moulds for the market.

The iron resulting from the operation is brittle and valueless, thus it ought only to be employed to make sulphides under the treatment by sulphuric acid. The apparatus is constructed as follows:—A cylinder is provided made of wood or copper mounted on two pivots of large enough diameter, said pivots being hollow, and communicating with the interior of the cylinder. This said cylinder is provided with a door along the whole of its length, which is kept closed by means of a pressure screw carried on a piece of wood or metal or any hard substance, said screw pressing firmly on a band of thick copper, thereby assuring the perfect closing of the door, said door working on an indiarubber hinge, which serves to keep the apparatus steam tight. On one side of said cylinder is provided a pipe in connection with the heating apparatus, said tube terminating in a copper piece perfectly polished, and is supported against a projecting piece set completely up to the right hand pivot. A spiral spring serves to assure the perfect contact of the said collar and projecting piece. The pivot on the right hand side of the cylinder carries a tube which is in communication with a lentiform vessel placed at the end. The rotation of the cylinder will not prevent the perfect communication of the steam.

On the other side is a second pipe, which is terminated in a similar manner to the first mentioned pipe by a collar piece, which comes in contact with another collar piece by means of a spiral spring. Another pipe is fixed in the left hand pivot. It is set vertically, and is always in place at the top of the cylinder. The aforesaid second pipe carries three branches, each provided with a cock—the first branch ought to be open during the whole operation to allow of the escape of the gases and oxide vapours. A suitable retort receives these vapours, and separates the acid therefrom by condensation—the second branch serves for the introduction of the chloride of tin or the hydrochloric acid—and the third serves for the washing if it is desired in the cylinder directly; either an alkaline liquid or pure water being introduced by this branch. A tap is fixed on the cylinder for emptying the liquids therefrom.

NEW PROCESS IN SULPHUR MINING.—Messrs. de la Tour du Breuil, having been engaged for 10 years in the direction of sulphur mines in Sicily were struck by the great loss involved in the ordinary process of separating the sulphur from its gangue. The idea occurred to them to increase the heat of the boiling water by the presence of a salt which holds it in solution. They fixed upon chloride of calcium on account of cheapness and the uniformity with which it maintains a temperature of 120° (248° Fahr.). The bath contains 65 per cent. of chloride of calcium and can serve indefinitely. The apparatus consists of two rectangular vats which are coupled and inclined at

an inclination of 10 per cent. As soon as the operation is terminated in one of the vats the boiling liquid is drawn into the other, which has been previously filled with the ore. While the solution is going on there, which requires about two hours, the first vat is emptied and recharged; hence there is no interruption in the work and the bath is never cooled. A single fire is sufficient for the two vats, the heat being turned alternately from one to the other. This process presents the following advantages:—1. A cheap extraction of the sulphur, the cost being only about \$1 per ton; 2. Great purity, analysis showing only 1-20th of 1 per cent. of earthy residue and no trace of sulphurous or sulphuric acid; 3. Possibility of operating during the whole year, since there is no production of sulphurous acid, which is so injurious to the public health and to agriculture.—*Comptes Rendus.*

WATSON BROTHERS' MINING CIRCULAR.

WATSON BROTHERS,
MINEOWNERS STOCK AND SHARE DEALERS, &c
1, ST MICHAEL'S ALLEY CORNHILL, LONDON

Nearly twenty years ago the weekly information which had previously been published for a great number of years in WATSON BROTHERS' Mining Circular was transferred to the columns of the *Mining Journal*, with the following announcement.

In the year 1843, when mining was almost unknown to the general public attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," compiled and published in 1843, by Mr. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, published annually in the *Mining Journal* for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring the success in the aggregate," and Messrs. WATSON BROTHERS have always selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines, and shared dealing than there is at present; and from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services and advice to all connected with mines and mining.

Messrs. WATSON BROTHERS are daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

The great extension of mining business, the difficulty so often complained of by country shareholders in getting accurate and disinterested information as to the state of Cornish and Foreign Mines, and of the financial and real position of mining companies generally, have induced Messrs. WATSON BROTHERS to make their Circular now published in the *Mining Journal* more extensively known, and to state—

That they issue daily to clients and others who apply for it a Price List (as supplied to most of the London and country papers), giving the closing prices of mining Shares up to Four o'clock.

They also buy and sell shares for immediate cash, for the usual fortnightly settlement in all Mines dealt in on the Mining and Stock Exchanges, at the close market prices of the day, free of all charge for commission. They deal also, on the same terms, in the Public Funds, Railways, Telegraphs, and all other Securities dealt in on the Stock Exchange.

Having agents in all the mining districts, they are constantly getting mines inspected for their own guidance, and will also obtain special reports of any particular mine for their clients, for the inspecting agent's fee of £2 2s.

Messrs. WATSON BROTHERS take this opportunity of stating that on July 1 they took into partnership Mr. H. J. DEAN, who has been for a number of years associated with the firm, and Mr. W. H. WATSON, who has had some years experience of practical mining and engineering in Cornwall, and is the son of the senior partner. The firm will still be called that of "Watson Brothers."

The number of weekly communications received from almost every part of the world in regard to remarks in this Circular indicate so plainly how much they are read (and, we trust, appreciated) that they will be continued by the same writer.

Indeed, while new blood is introduced to attend to the more laborious and mechanical details of the business, the old will have more time to devote to their different departments.

The accounts referred to may be correct, but are not clear, for it seems absurd to bring down a debt as an asset. After enumerating the liabilities on one side the first item under the head of assets the debit is called—"Balance brought down 2390£. 1s. 1d." This should have been at the bottom of the list as a balance against the mine, being in fact not an asset, but the balance of liabilities over the assets.

It is not in "mortals to command success" in anything, much less in mining, the most uncertain, as at times the most profitable of all pursuits. It is for this reason we deprecate "1.—Speculating for the account," buying in fact for a mere rise or fall in the market, and not for any permanent speculation in the mine itself. 2.—Speculating in mines with money you cannot afford to lose. 3.—Confining speculation to one mine. A diversion of risk upon the principle of insurance at Lloyds is the safest plan. Take five or six well selected mines, buy a few in each, pay for them, and hold on for certain points to come off, but have nothing to do but "time bargains," or buying for accounts. Very often in these cases you may be compelled to close just when success is about to dawn.

There is a saying that at times few things are more deceptive than figures, except facts; and those who have been relying too much on statistics, which some time ago showed that tin must, or ought to, rise, have been sadly out in their calculations; but few expected such a serious fall as that we have experienced within the last fortnight; that the smelters would take advantage of it by constantly reducing the standard for ore is only what we might expect. Big mines will have to reduce their expenses and their profits for a time; but we hope we shall never see again—though there are symptoms of it—that which disgraced mining when tin was low before—heavy debts allowed to accumulate, enabling one set of shareholders to get out of their shares, and leaving others to pay their liabilities. It should be insisted upon that at every meeting an adverse balance should be met by a call.

The floods of late have sadly interfered with surface works at many mines in Cornwall as well as in Wales—some have also been flooded at the bottom levels.

There is no particular change at any of the mines this week. Prince of Wales have dropped considerably, and owing, we suppose, to the notice of meeting and the call that may be required. The mine is gradually improving in prospects and in returns, and we hope it will not be long before the necessity for calls may cease to exist.

The lode in the shaft at Great West Chiverton is 3 ft. wide, with mundic and good stones of lead in it.

The stamps at East Blue Hills are now fairly at work, and we understand the tin this month will pay costs, and next month leave a good profit. Some months ago the tin ore discovered was valued by an independent agent at 6000£. None of this has been taken away, and a good deal more has since been laid open. We hope, therefore, for good returns in future. All the earlier tin sales were from borrowed stamps, and repairing and erecting the present has taken a longer time than we expected.

MULBERRY TINWORKS.—The present company has evidently applied itself with energy to the development of this property, since the manager reports this week that the whole of the 108 heads of stamps, driven by water-power, and the plant attached, had been put in thorough working order and were now doing their work well; that the tinstuff from the new bottom level was giving about 50 per cent. more produce per ton than that from the upper level. The directors have gone carefully through the accounts and decided to declare an interim dividend of 10 per cent. per annum for the quarter ending Sept. 30. The working profit would, it is said, allow of a larger dividend; but it was deemed prudent to reserve the excess. It was stated that the engine to drive 76 heads of stamps was to set to work about five weeks ago with the first 32 heads, and that another 32 will be going in a few days. The work has been done well and the result of stamping by these means is extremely satisfactory; several tons of tin therefrom will be sold next week. A contract for the erection of a large steam-engine and 150 additional heads of stamps at the mouth of the lower level has been entered into, and it is proposed to follow this by a turbine and a further 36 stamps heads.

The directors are laying down plenty of machinery, as their tin ore is in sight to almost any extent, and has not to be sought for, and there are no heavy working charges on the property.

ELASTIC TUBULAR PISTON PACKING.

To obtain a tight joint with a self lubricative packing, working almost without friction, and requiring but little compression by the gland to keep it tight, Messrs. Chapman and Harper, of the Irwell Rubber Works, Billiter-street, have just introduced some improvements in their hollow packing. They form an india-rubber tube of suitable section, and over the interior of it they form an outer casing of canvas or other suitable woven fibrous material of the desired degree of coarseness, to come in contact with the moving part, which may consist of one or more thicknesses of the same, and may be secured or cured together by the use of india-rubber solution, or applied to the tube before curing so as to obtain a similar result, and in some cases they may form the outer fibrous tube on the internal tube without any intermediate canvas or other fibrous covering by what is known as "overspinning," or weaving, the same in a similar manner to that in which whip sticks are covered. When the covered tube is formed they punch perforations of suitable dimensions at right angles or nearly so to each other along the centre line of the length of the tube, extending completely through both sides of the covered tube, or otherwise conveniently placed to ensure affording thereby access to the interior otherwise than at the ends, in order that when the same is in the stuffing-box the water from the condensed steam and the lubricant, where such is used, may fill or gain access to the interior, and so form a source of supply during the working, and be drawn or caused to flow out by the motion of the moving part which it encircles. They sometimes make the perforations before they put in the last overspinning and fibrous cover so as to prevent the covering coming to pieces. In practice they close the open ends of the tube when cut to the required length for filling the stuffing-box, either at the top end, the bottom end, or both, by means of suitably formed caps or covers, which may be made of fibrous material woven or plaited and coated with india-rubber, or the same may be formed of rubber of a suitable quality and thickness without any fibrous material, and be applied at and over the end with a sufficient length of the part which goes over the same to ensure its not slipping off, and when preferred it or they may be secured on the packing with cord or wire.

When this packing is placed in the stuffing-box, and bears against the side and bottom of the same, and against the moving part which it encircles, it will be sufficiently supported to prevent the pressure of the gland from closing the sides, and so leave the interior hollow, to act as a reservoir, into and from which the condensed steam and lubricant, where such is used, will pass by means of the holes, perforations, or apertures hereinbefore described, and so enable a tight joint to be maintained with less pressure on the gland, and consequently reduce the friction so generally encountered where the ordinary solid packing is used. In some cases it will be found beneficial to insert in the interior of the larger pieces of tubular packing before inserting them in the stuffing-box a suitable length of smaller tube, which may be a length of the smaller diameter of the same packing, in order to assist in keeping the interior open, and in some cases gasket may be similarly employed. It is pointed out that this packing has every promise of greater durability, from the fact that after a certain time of use it may be removed, and by being replaced with a quarter of a turn round on its axis given to it a fresh wearing face or surface is exposed to the action of the moving part, thus as it can be turned three times without bringing the first surface into contact with the moving part, it is fair to assume that it would last a longer time without requiring to be replaced by new than any of the packings ordinarily used for the purpose. It will also be found to be easily applied to and removed from the stuffing-boxes, as it will not want to be forced in with a very great pressure, nor get set solid.

WATER AND ITS TEACHINGS.

The opinions of authors are usually much less valuable than their facts, especially when the subject treated of is wide in its scope, or when pains have been taken to bring together all available data for the benefit of his readers. Fully recognising this, Mr. C. LLOYD MORGAN, F.G.S., A.R.S.M., lecturer at the Diocesan College, Rondebosch, Cape Town, has, in his *Water and its Teachings in Chemistry, Physics, and Physiography*—London: Edward Stanford, Charing Cross—given a well selected series of 1719 useful notes, carefully arranged and free from comment of any kind, so that each student is enabled to interpret the teachings for himself. The notes are arranged under 50 different heads, and some of these are again subdivided in order to carry the classification to the furthest useful limit. Taking the heading *Glaciers*, for example, the notes are separated according as they refer to the conversion of snow into ice, to the flow of glaciers, to the explanation of glacier motion, to crevasses, to moraines, or to the signs of ancient ice actions. So with reference to *Steam and Volcanic Action*, the notes are arranged as they relate to volcanic eruptions, volcanic cones, the effect of volcanoes on scenery, or the general history of a volcanic district. Again, the *Winds* are treated of in a different series of notes according as the exact matter considered is—the areas of high and low pressure, the trade winds and their easterly, cyclones and anticyclones, or the effects of the winds. In the same way, the building of the rocks, the alteration of the rocks, the upheaval of the rocks, mountain ranges, the carving of the continent, denudation, are separated in the section devoted to the *Formation of Continents and Mountain Chains*. The *Water and Light* section includes the description of light, reflection, colour, refraction, dispersion, the rainbow, calcareousness and fluorescence, and differential scattering. And in considering the *Influence of Water on Climate*, according as that influence arises from its high specific gravity, through the power possessed by its vapour of absorbing heat, by its latent heat, through ocean currents or geological climate.

To seismologists the chapter on steam and volcanic action will be of special interest, and some of the notes reproduced are sufficiently startling to receive attention. Cotopaxi, in the Andes, is said to have hurled a block of 200 tons weight to a distance of nine miles; and in the subsection giving the general history of a volcanic district many useful hints are given to facilitate the prediction of the approach of volcanic action. With regard to the formation of continents and mountain chains, Mr. C. Lloyd Morgan arranges his notes so as, in the first instance, to trace the birth of a continent and the formation of its backbone—a mountain range. He notes that wind and rain, and rivers, glaciers, and the waves of the sea are continually now, and have been continually in the past, wearing away the rocks and redistributing the products of waste at lower levels, this waste being built up again by mechanical, chemical, and vital agency. Every note gives evidence of having been well considered and carefully, and the volume will doubtless be widely appreciated by geological and other natural history students.

WHEEL PEEVOR.—At the meeting on Nov. 2 (Mr. Thos. Pryor in the chair), the accounts showed a loss on the four months' working of 1875. 8s. 1d., and a total debit balance of 2390l. 1s. 1d. A call of 10s. per share was made. The agents, Capt. White and King, after reporting upon the various points of operation, state that since the last meeting they had been coasting for Great North Downs copper lode, but had not as yet found it, although they were expecting to do so daily. The productive qualities of this lode in Great North Downs and in the mines west of them were well known, and they saw no reason why it should not be found productive in Wheel Peevor as well. It passed through the whole length of their set, and had not yet been seen within their limits. They were very sorry indeed that they could not meet the adventurers with better results that day, but as could be seen by the report, they had several points which they considered, when reached, would again enable them to increase the returns and improve their position. With reference to the financial condition of the mine, the Chairman remarked that it was a long time since they had the question of a call introduced there, and he was very sorry indeed to have to do so that day. But they had always gone on the principle of making a call to meet any loss that might be incurred, and had always divided any profit, and there was no reason why they should depart from that course. It was five years and a half since they began to pay dividends there, and in that time they had divided 28,025l., or 8l. 13s. 6d. per share.

LIST OF SMELTING, METAL EXTRACTION, ARSENIC, & BARYTES COMPANIES IN THE UNITED KINGDOM.

TIN.
Thomas Bolitho and Sons, Chyandour, Cornwall.
Williams, Harvey, and Company, Trethellan and Mellanear, Cornwall.
Daubuz and Company, Cavedras and Treloeweth, Cornwall.
R. R. Michell and Company, Treveile, Penzance Cornwall.
Bissoe Bridge Company, Bissoe, near Truro, Cornwall.
Redruth Tin Smelting Company, Redruth Cornwall.
Calenick Tin Smelting Company, Calenick, Cornwall.
Charlestown Tin Smelting Company, Charlestown, St. Austell.
Penpoll Tin Company, Redruth.

COPPER.
Vivian and Sons, Hafod, Swansea.
Pascoe Grenfell and Sons, Middle Bank, Swansea.
Nevill, Druce, and Company, Llanelly.
Williams, Foster, and Company, Swansea.
Mason and Elkington, Pembrey.
Copper Miners' Company, Aberavon.
Charles Lambert and Company, Port Tennant, Swansea.
The British and Foreign Copper Company, Liverpool and St. Helen's.
Landore Copper Company, Landore, near Swansea.
Newton, Keates, and Company, St. Helen's.
Baxter and Company, St. Helen's.
Bibby, Sons, and Company, St. Helen's and Liverpool.
W. Roberts, jun., St. Helen's.
James Keys and Son, Whiston Works, Cheadle, Staffordshire.
Cape Copper Company, Swansea.
Ravenhead Copper Company, Liverpool.
Pontifex and Wood, Garratt Copper Mills, Surrey.

LEAD.
Bewick and Partners (Limited), Hebburn, Newcastle-on-Tyne.
Nevill, Druce, and Company, Llanelly.
Runcorn Smelting Company, Runcorn.
The Panther Lead Works, Bristol.
Blackworth Lead Works, Bristol.
C. Pass and Son, Bedminster Works, Bristol.
Weston, Sons, and Company, Bristol.
Cookson and Company, Howden, Newcastle-on-Tyne.
Locke, Blackett, and Company, Wallsend-on-Tyne.
Executors of Jos. Dinning, Haydon Bridge.
Vivian and Sons, Swansea.
Enthoven and Sons, London.
Locke, Lancaster, and Company, London.
Pontifex and Wood, Farringdon Works, London.
Logan Edward, Birkenhead.
Par Lead Smelting Company (C. Remfrey), Par, Cornwall.
Peter Glover and Robinson, Widnes Lead Works, near Warrington.
White Rock Works, Swansea.
Quirk, Barton, and Company, St. Helen's.
Adam Eytton, Manchester, Holywell.
The Cambrian White Lead Company, Brymbo, near Wrexham.
Joseph Walker, Parker, and Co., Dee Bank, Baglit, and Newcastle.
Governor and Company of Lead Smelters, Nenthead, Alston Moor.
Stanhope, Durham.

ZINC.
W. B. Beaumont, Allendale, Northumberland.
Rookhope, Durham.
Mill Dam Mining Company, Bakewell.
Joseph Wess and Son, Les Lead Works, Matlock Bath.
J. J. Burton and Company, Middleton Dale and Bradwell.
Smithbach Lead Company, near Shrewsbury.
Pontesbury Lead Works, Minsterley, near Shrewsbury.
J. H. Moore Brough Works, Hope, near Sheffield.
E. Backhouse, Darlington.
Greenside Mining Company, Penrith.
The Keld Head Mining Company, Wensleydale.
John York, Pateley Bridge.
Duke of Devonshire, Grassington.
The Duke of Buccleuch, Wanlock Head.
The Lead Hills Mining Company, Lead Hills.
Lister, Robinson, and Company, Grinton Moor.
The Arkendale Mining Company, Arkengarthdale.
The (A.D.) Lead Company, Blakethwaite.
R. Milner and Company, Belde Hill.
The Swaledale Lead Company, West Swaledale.
Executors of Sir G. W. Denys, Bart., Surrender, Swaledale.
The Mining Company of Ireland (Limited), Dublin.
E. C. Goodhart and Company, Pencilwood Lead Works, near Swansea.

SPALTER.
Pascoe Grenfell and Sons, Upper Bank Spelter Works, Swansea.
Baglit Zinc Company.
Vivian and Sons, Swansea.
Kenrick and Son, Wynn Hall, Spelter Works, Ruabon.
Charles Titterton, Phoenix Zinc Works, Warrington Junction.
Dillwyn and Company, Swansea.
Joseph Thompson, Spelter Works, Carlisle.
Ryland Brothers, Warrington.
Crown Zinc Company, Swansea.
Villiers Spelter Company, Morriston, Swansea.
Swan and Company, Maryhill, Glasgow.
Swansea Vale Spelter Company (Limited), Swansea.

WHEEL CREBOR—SPECIAL REPORT.

The 48 fm. level, east of new shaft, end 12 fms. from cross-cut; lode 2 ft. wide, mixed with good ore, spar, mundie, &c.—a promising lode. Lode in back and bottom, for 12 fms. in length, worth from 5l. to 25l. per fathom. Distance from shaft 80 fms.; price for driving, 5l. per fathom. The 72 fm., east of new shaft, level driving by two men, at 5l. 10s. per fathom; more hands should be employed here. Lode 4 ft. wide, composed of capel, spar, mundie, and spots of ore. The course of ore in the 48 fm. level is about 30 fms. ahead of the end at the 72 fm. level; when this end has been driven to reach the ore referred to in the 48 fm. level, the value of the mine will be increased immensely. 20 fms. east of new shaft, at the 72 fm. level, a cross-cut is being driven south 7 fms., with a view of cutting the south part of the main lode, which is supposed to be standing undiscovered there; the forebore indicates the lode being near. At the 96 fm. level no driving is in hand; the ground is being stoped by eight men; length of stopes about 15 fms. The stoping is guided by the paying qualities of the ground; the lode is worth from 15l. to 25l. per fathom. No communication is made with the level above. The 108 fm. level, east of new shaft, has been driven about 100 fms.; end with some appearance of lode in it, fairly defined; ground not promising; price for driving, 5l. 10s. per fathom; the last 60 fms. have been unproductive. It is questionable as to whether this driving is on the main part of the lode. The stopes on this level, on south part of the lode, are worked by four men; the lode is valued at 20l. per fathom. This lode may be found standing to the south of the level eastward. Stopes in the bottom of this level, worked by four men; lode 5 ft. wide, value 25l. per fathom. We notice that the south part of the lode, going west of new shaft, has not been explored; we think, however, it should be.

Bottom of 123 fm. level, east of new shaft about 30 fms.; stoping on north part of south lode by six men, lode 5 ft. wide, worth about 40l. per fathom; the bottom of the stopes is about 2 fms. below the level. A winze has been sunk 9 fms. below the level, and will soon be holed to the bottom level. The greater part of the winze is valued from 50l. to 70l. per fathom. The end in the 120 fm. level—80 fms. east of new shaft—lode 8 ft. wide, with capel, spar, mundie, and some copper ore, presenting great strength and good indications for a course of ore. The great course of ore in this level is stated to be over 20 ft. wide and 20 fms. in length, and is valued, in places, by the agents of the mine at more than 100l. per fathom. The 132 fm., or bottom level, is driven east of new shaft about 23 fms. At this point an oblique driving has been commenced to go in the direction of the winze referred to from the bottom of the 120 fm. level, in order to unwater and complete the communication between the two levels. The great course of ore seen in the 120 fm. level, and referred to, is supposed to be standing entire, to the south of the present driving, at the bottom level. The 132 fm. level, west of new shaft, has been driven 19 fms., and a good and most promising lode has been discovered; ground very cheap for exploration. It is our opinion that this new discovery will be found to connect itself with Andrew's bunch, now standing in the bottom of the 120 fathom level, to the west of new shaft, and now accessible for stoping purposes. Great importance should be given to this discovery, which will yet improve.

The cross-cut north at the 120, to explore several lodes existing in that direction, the distance from commencement is we believe about 70 fathoms, and no practical man could do other than justify and commend this exploratory undertaking. The nature of the ground is all that is desirable. We have no doubt that when the lodes are intersected they will be found very productive—a second Devon Consols would be quite possible. We are informed that there are three lodes to be cut by this cross-cut standing in virgin ground to the surface. In concluding our remarks, we may observe that the mine has a great number of good and attractive features, and will be a very important property in the future, and should yield large profits. No steam-power is required for any purpose, as any amount of water-power is available. A new shaft for pumping and winding purposes has recently been made from surface to the bottom of the mine—132 fms. The workings throughout are thoroughly ventilated by this second shaft, and the entire condition of the mine improved by it. The tram-road connecting the new shaft with the dressing-floors should be hurried on so as to cheapen the discharge of the ore from underground, and also to convey to the dressing-floors the large accumulations of ore lying at the new shaft. It will be only natural to find that the three great courses of ore now in sight at the 120 will unite at a deeper point, and result in immense wealth.—J. BURGESS AND SON.

MR. W. TREGELLAS, 40, BISHOPSGATE STREET WITHIN, E.C.
Deals in all descriptions of STOCKS and SHARES at close market prices.

WANTED, COMMISSION HOUSES, ENGINEERS, GENERAL MILL AND COLLIERY FURNISHERS. Exceptionally good terms as wholesale, district, and export agents in unrepresented centres throughout the United Kingdom, Continent, and the Colonies. **MORGAN CELEBRATED IMPROVED BOILER COMPOSITION**, manufactured on approved scientific principles for preventing incrustation and neutralising corrosive acid in feed water.

"An invaluable article at a very low price."
ANALYST'S REPORT (Extract).—"I am convinced it will be useful in preventing and removing incrustation without any injurious action on the metal."
Apply to the Patentee and Manufacturer,
W. H. MORGAN, ENGINEER, GLOUCESTER.

PRELIMINARY ADVERTISEMENT.

THE PANDORA LEAD MINE, near Llanrwst, FOR SALE, BY TENDER, by order of mortgagees.
For particulars and conditions apply to Mr. F. Foss, 3, Abchurch-lane, London, E.C., Solicitor, and Mr. W. HODSOLL, Farningham, Kent, Auctioneer.

WANTED, an ESTIMATE or TENDER for SINKING a SHAFT 40 fathoms deeper, and for **DRIVING** 200 fathoms of levels in a **COPPER MINE** possessing ample **WATER-POWER** to drive **FOUR BORING MACHINES**.

Payment of two-thirds of the amount will be made monthly.
For further particulars, apply Mr. BENNET JOHNS, Coniston Mines, via Ambleside.

HORNACHOS SILVER-LEAD MINING COMPANY (LIMITED).

WANTED TO PURCHASE, from ONE HUNDRED to ONE HUNDRED AND FIFTY FULLY PAID-UP SHARES in the above company.

Offers, stating number of shares and lowest price, to be addressed to "A. C." MINING JOURNAL Office, 26, Fleet-street, London, E.C.

COAL.

WANTED, PERMANENT CONTRACTS with several Collieries for **COAL**, suitable for making Coke for Iron and Steel Smelting Works,—say, 50 tons a day from each Colliery.

State lowest price f.o.b. at shipping port, length of contract, proposed conditions of payment, and quantity per diem.
Address, "Coal," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

WANTED, a thoroughly experienced MINING ENGINEER (Silver and Copper) abroad in service of Foreign Government. Highest references and Certificates of Competency will be required.

Address in first instance by letter, stating education, age, experience, and salary in last employment, to "Alpha," care of E. Ingram, 3, Gardener's-lane, Delahay-street, Westminster, S.W.

ARGENTIFEROUS COPPER MINE—TO CAPITALISTS.

WANTED, SEVERAL SUMS of £250 to £1000 to COMPLETE a **SYNDICATE** for the **PURCHASE** of a most **VALUABLE MINE** in the Basses Pyrenees, 11 hours only from Bayonne. Estimated annual returns at least 22 per cent. See report of English mining engineer (highest authority on Pyrenean Mines), sent on application. Contract with first Swansea house to take whole produce at liberal prices. Mine easily inspected by investors.

Address, "A. C. M.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

BOILER FOR SALE.

A TUBULAR BOILER, in good condition, 20 feet long by 5½ feet diameter. Can be thoroughly examined as it lies.

Apply at Mr. C. R. ENOCK, Cambrian Testing Company, 16, Corn Exchange Chambers, Chester.

A CASHIER, recently returned from a Spanish Mine, is now **OPEN for ANOTHER ENGAGEMENT**. Speaks and writes English, Spanish, and Italian, and is thoroughly conversant with all the details of Mining. Unexceptional references.

Address, Mr. THOMAS BUTLER, 138, Fenchurch-street, London.

MINE SUPERINTENDENT.

THE ADVERTISER, aged 34, just returned from India, where he has held the post of Superintendent of four Gold Mining Companies' Works, is **OPEN to a RE-ENGAGEMENT**. Is well acquainted with the South African Gold Fields; thoroughly understands the Planning, Erection, and Working of Mining and Reduction plant, and is a practical Metallurgist. First-class testimonials and references.

Address, "R. J. A.," MINING JOURNAL Office, 26, Fleet-street, E.C.

NEW TERRAS TIN MINING COMPANY (LIMITED).

Those who are desirous of **INVESTING HEREIN** should apply at once to the Associated Mineowners' Corporation, Grampound-road, Cornwall.

ROMAN GRAVELS MINING COMPANY (LIMITED).

Notice is hereby given, that the directors have **DECLARED a DIVIDEND of FIVE SHILLINGS PER SHARE**, free of income-tax, **PAYABLE**, on the 29th inst. to the shareholders on the books of the company on the 14th inst.

By order, **FELIX F. WILSON**, Secretary.
30, Finsbury-circus, London, E.C., 10th November, 1882.

MINE "EL CALLAO."

COUPONS OF SHARES 322
Gold in bars produced during the month of September, 1882, and remitted to Messrs. Baring Brothers and Co., London, 9406 19-100 ounces.

DIVIDEND distributed for each coupon, \$400.
(Signed) **A. LICIONI**, President.
(Signed) **VICTOR T. GRILLET**, Treasurer.

LA SOCIETE ANONYME DES MINES ET FONDERIES DE PONTGIBAUD.

THE ORDINARY GENERAL MEETING of the shareholders of the above company will **TAKE PLACE** in Paris, at the offices of the company, No. 15, Rue de Chateaudun, on Thursday, the 30th day of November inst., at Three o'clock, P.M., precisely.

The qualification to take part in this meeting, is the holding of 20 shares, which must be deposited at the office in Paris, or at the agency in London 10 days before the meeting takes place.

Shareholders may be represented by proxies at the meeting, but no one can be the bearer of a proxy unless he himself is the owner of 20 shares.

Proxies must be upon French stamped paper, and according to the form which can be obtained at either of the offices of the company.

JOHN TAYLOR AND SONS.
London Agency, 6, Queen-street-place, London E.C.
Dated, 10th November, 1882.

GEO. G. BLACKWELL,
26, CHAPEL STREET, LIVERPOOL.
HANDLES MANGANESE, BARYTES, SPARS, and all ORES, ON SALE OR PURCHASE.

SAMUEL JAMES, STOCK BROKER AND MINING SHARE DEALER, 14, ANGEL COURT, LONDON, E.C.

Son of Capt. A. T. JAMES, late of South France, and other mines. Member of the Redruth Mining Exchange.

OFFERS FOR SALE, all or part, of the following shares free of commission:—

20 Arenal.	50 Glenroy.	50 South Frances.
50 Bedford.	20 Grogwinlon.	50 South Penrithal.
20 Blue Hills.	35 Gunnislake (Clitters).	30 Tamar.
50 Bratsberg.	200 Herodfoot.	100 Tankerville.
75 Camborne Vein.	25 Hington Down.	10 Tincroft.
10 Carn Brea.	20 Killifreth.	20 Tin Hill.
5 Cook's Kitchen.	25 Kilt Hill.	10 West Basset.
200 Cootacovil.	30 Langford.	10 West Frances.
100 Coates.	100 Morla Du.	20 West Kitty.
50 Devon Gt. United.	200 Mysore Reef.	25 West Devon.
100 Devon Friendship.	25 New Kitty.	10 West Peevor.
100 D'Eresby Mountain.	50 North Busy.	20 West Polbrean.
10 Dolcoath.	100 Norway Copper.	5 West Seton.
50 Drakewells.	500 Old Owacombe.	5 Wheel Agar.
55 East Blue Hills.	100 Parys Copper.	15 Wheel Basset.
30 East Buller.	100 Penhalls.	10 Wheel Grenville.
20 East Chiverton.	50 Phoenix United.	25 Wheel Jane.
50 East Foot.	4 South Caradon.	10 Wheel Kitty (St. Agnes).
50 Eberhardt.	23 South Condurrow.	
20 Frongoch.	100 South Crebor.	50 Wheel Uny.
50 Ganton.	10 South Crofty.	25 Wheel Crebor.
	46 South Devon.	150 Wheel Sisters.

Am Buyer of East Wheel Rose, Old Shepherds, Mounts Bay, and Treavean. The present is a favourable opportunity to purchase low priced shares, and strongly recommend their purchase.

S. JAMES is a buyer or seller of all Home and Foreign Mining shares at close market prices.

Orders by letter or telegram promptly attended to. Speculative accounts not opened on any terms whatever.

MINING MACHINERY, MILLING MACHINERY

Of the MOST APPROVED AMERICAN PATTERNS.

GOLD MILLS.

The California pattern of Gold Stamp Mill is universally accepted as the most perfect, economic, and efficient made. We have over 900 stamps in successful work in the various Western Gold Districts.

SILVER MILLS.

Silver amalgamation in Pans is essentially an American system evolved after years of work on the rich silver mines of Nevada.

We have over 500 Stamps, with necessary pans, settlers, roasting furnaces, &c., all of our own manufacture, at work in different silver camps of the United States, Mexico, and South America, and Philippine Islands, Asia,

CONCENTRATION MILLS

Of the most approved German pattern and arrangement, or with Stamps and Frue Vanner Concentrators for low grade silver ores, light in lead. We have over 20 large German pattern mills at work on lead, zinc, or copper ores, and numerous Vanner mills on ores never before successfully concentrated.

Mining Pumps, Cornish pattern, of the largest sizes, Hoisting Engines from 4 h.p. up to the largest direct-acting engines to sink 3000 feet.

SMELTING WORKS.

We have 80 Water Jacket Smelting Furnaces in use from 20 in. circular up to 54 in. by 60 in. for lead and silver smelting; and special High Jacket Furnaces for copper ores.

Engines of any size, plain slide valve, Corliss, compound Corliss. Boilers, all sizes. Leaching Mills, Hallidie Wire Rope Tramways, Comet Crusher, with capacity of 12 to 20 tons per hour. White, Howell, Bruckner, and Stetefeldt Roasting Furnaces, &c.

We have had twenty years' experience in the manufacture solely of MINING MACHINERY, and have special facilities for shipping to all foreign parts through our New York Office, where all details of clearance, shipment, and insurance are conducted. Our machinery is already well known in Mexico, Peru, Chili, Venezuela, Honduras, and other South American countries.

Correspondence solicited. Descriptive Circulars and Catalogues on application.

FRASER & CHALMERS.

PRINCIPAL OFFICE AND WORKS. NEW YORK OFFICE.
Fulton and Union Streets, No. 2, Wall Street,
Chicago, Ill., U.S. New York, U.S.
COLORADO OFFICE—CHEESMAN BLOCK, DENVER.

INCREASED VALUE OF WATER-POWER.

MacADAM'S VARIABLE TURBINE.

This Wheel (which is now largely in use in England, Scotland, and Ireland) is the only one yet invented which gives proportionate power from both large and small quantities of water. It can be made for using a large winter supply, and yet work with equal efficiency through all variations of quantity down to a fifth or even less if required. It is easily coupled to a steam-engine, and in this way always assists it by whatever amount of power the water is capable of giving, and therefore saves so much fuel.

This Turbine is applicable to all heights of fall. It works immersed in the tail-water, so that no part of the fall is lost, and the motion of the Wheel is not affected by floods or back-water.

References to places where it is at work will be given on application to—

MacADAM BROTHERS AND CO., BELFAST.

EVERY DESCRIPTION

OF NEW AND SECONDHAND

ENGINES,

BOILERS,

PUMPS,

SHAFTING, PULLEYS, BELTING,

AND

MACHINERY GENERALLY.

Before Purchasing, send for

PHILLIPS' MACHINERY REGISTER,

Containing over 2000 entries of above.

ADDRESS—

CHARLES D. PHILLIPS,

EMLYN WORKS, NEWPORT, MON.

Now Ready,

TABLE OF THE ORDER OF SUPERPOSITION OF BRITISH ROCKS, showing the SYSTEMS, FORMATIONS, GROUPS OF STRATA, CHARACTERISTIC ROCKS, PREVALENT MINERALS, and TYPICAL FOSSILS.

By T. A. READWIN, F.G.S., M.M.S., &c.
Published by Messrs. Spon, Charing Cross. Price One Shilling.

THIRD EDITION

ENGLISH CAPITALIST wishing a CORRECT REPORT on the SILVER MINES OF COLORADO will do well to apply to—
Capt. DANIEL ROBERTS, Georgetown, Colorado.

NORTHERN LEAD MINING COMPANY (LIMITED).

IN LIQUIDATION.

VALUABLE MINING PROPERTY AND PLANT FOR SALE.

THE LIQUIDATOR INVITES TENDERS for the PURCHASE of the valuable

MINING PROPERTY, MACHINERY, PLANT, AND OTHER EFFECTS

Of the company, comprising the Brandon Walls, Thorney Brow, and Stotsfield Burn Mines, situated about four miles from the town and railway station of Stanhope, on the North-Eastern Railway, and contiguous to the Bolton depot of the Weardale Mineral Railway.

The property consists of THREE SEPARATE MINES, as above mentioned, containing three distinct groups of lodes, which are between the productive iron mines of the Weardale Iron Company and the celebrated lead mines of Mr. Beaumont, being among the most productive of the kingdom. These mines have yielded large quantities of lead and iron; and, in the opinion of the best mining experts who inspected them, only require a moderate expenditure of capital and vigorous development to prove highly remunerative.

The MACHINERY AND PLANT include a 38 in. Cornish PUMPING ENGINE, with 10 ton boiler, gearings, connections, &c.

A horizontal 22 horse power WINDING ENGINE, with 8 ton boiler, winding gear, two drums, two cages, and 200 fms. of steel wire rope.

A 44 feet and three other WATER WHEELS, two crushers, one pony.

A 6 horse power PORTABLE ENGINE, steel wire rope, &c., complete dressing floors, with all necessary appliances, iron rails, &c., &c.

60 fathoms of metal pumps, 11 by 3 inch, 36 fathoms of 7 inch metal pumps, numerous buildings, and mining implements and appliances.

Tenders to be addressed, on or before Monday, the 13th day of November, 1882, to WILLIAM EDWARDS, Esq., Liquidator of the Northern Lead Mining Company (Limited), Waterdale, Wolverhampton.

GLENROY LEAD MINING COMPANY (LIMITED).

IN LIQUIDATION.

THE LIQUIDATORS are PREPARED TO RECEIVE TENDERS, on or before 20th November proximo, for the GLENROY MINE (in the Isle of Man) and the PLANT and MACHINERY thereon.

The Mine was formerly a portion of the celebrated Great Laxey Company's property, and has yielded lead and blende ores of very rich quality.

Further particulars can be obtained from, and tenders addressed to, the Liquidators, at 8, Austin Friars, London.

HOMER HILL COLLIERY, CRADLEY, Near STOURBRIDGE.

MR. HENRY KING is instructed by the Mortgagees to OFFER BY AUCTION, at the Midland Hotel, New-street, Birmingham, on Thursday, the 16th day of November, 1882, at Two for Three o'clock in the afternoon, subject to conditions of sale (which can be seen at the offices of the vendors' solicitors, after the 1st November) in One Lot, the above

VALUABLE FREEHOLD COLLIERY

In the South Staffordshire and East Worcestershire Coal Field, comprising 82 A. 2 R. 35 P. of surface, and 90 A. 0 R. 11 P. of MINES or thereabouts, including the celebrated THICK or TEN YARD COAL (nearly one-third of which is ungot), the BROOCH COAL and BROOCH IRONSTONE, yielding a large tonnage per acre of excellent ironstone, of which about 3 acres have been worked. Also the very VALUABLE and almost inexhaustible BEDS of the famed STOURBRIDGE FIRE-CLAY, which have been proved but little worked except for trial purposes, and immediately adjoining the mines of some of the principal workers of Stourbridge Fire-Clay.

The Thick Coal is capable of a weekly output of from 1500 to 2000 tons. It is now being worked, and is of good quality.

Upon an estate is an excellent house for manager, farm-house, malt-houses, and other buildings, a good dwelling-house, and 12 cottages. The yearly surface rental exclusive of about 13 acres of land in hand is nearly £400. The colliery buildings consist of offices, store-rooms, blacksmiths' and carpenters' shops, large and substantial engine-houses, range of stabling, pitmen's hovels, and other buildings. A self-acting incline delivers the minerals to the railway sidings and Land Sale wharf.

Shafts consist of two drawing shafts 7½ ft. diameter, fitted with pit frames slides, cages, &c.

FIXED MACHINERY AND PLANT.—The principal items consists of one pair of vertical winding-engines, 22-in. cylinders, 4 ft. stroke, air-compressing and other engines for over and underground hauling, and other purposes, weighing machines, syphon pumps in pit, and tubing connected therewith, Gubal ventilating fan with engine, coal screening apparatus, &c.

The loose stock, horses, and tools, of which an inventory can be seen, will be sold at a price to be named at the sale. There is a clay mill, with engine, brick-sheds, and kilns.

The Colliery is most advantageously situated in a thickly populated and great manufacturing district, and is connected with the Stourbridge and Birmingham branch of the Great Western Railway at Cradley. The Colliery contains ample siding accommodation.

The fixed plant and machinery are of the best and most modern description, and the workings are now in operation, so that coal-getting can be continued without interruption.

Leave to inspect the colliery can be obtained from Mr. WILLIAM BLOW COLLIS, Mining Engineer, Stourbridge.

Part of the purchase-money may remain on mortgage at £5 per cent.

Particulars and conditions of sale are being prepared, and may be had of Mr. WILLIAM BLOW COLLIS, Mining Engineer; Messrs. BERNARD and KING, Solicitors; or the Auctioneers, all of Stourbridge, and at the Offices of the Midland Counties Herald, Birmingham.

PRELIMINARY NOTICE, CLARA CONSOLS MINE, PONTERWYD, ABERYSTWYTH.

AN AUCTION will TAKE PLACE in NOVEMBER, 1882, for DISPOSING OF THE EXTENSIVE MINING PLANT and MACHINERY, comprising three powerful water-wheels, 60 fms. of pitwork, different sizes, great length of iron rods and connections, drawing and dressing machinery, and other mining equipments.

Particulars to follow in future advertisements and posters in the meantime.

Apply to WM. BATTYE, Esq., 16, Great Winchester-street, London, E.C.

TO BE SOLD, at the Castle Hotel, Neath, on the 21st day of

November next, at Three P.M.,

THE ABERDULAIS COLLIERY AND BRICKWORKS,

Three miles from NEATH, comprising the BRICKWORKS, and all the COAL

IRONSTONE, and FIRECLAY within certain property near ABERDULAIS

containing 550 acres, in a ring fence.

Unexpired term, 52 years. Dead rent, £733.

Royalties per Imperial ton:—

Werngored coal 8s.

Other coal 9d.

Iron ore 9d.

Fireclay 3d.

Wayleave 1d.

Surface, £2 an acre.

Distances from ports in direct communication with property by railway and canal:—From Neath, three miles; from Neath New Floating Dock, four miles; from Swansea, nine miles; from Briton Ferry, six miles.

To inspect deeds and for further particulars apply to WILLIAM GALLOWAY, Esq., Civil and Mining Engineer, Cardiff; Messrs. LINTON and KENSHOLE, Solicitors, Cardiff and Aberdare; or to Mr. JOHN M. LEEDER, Auctioneer, Oxford Chambers, Swansea.

MINING MACHINERY AND MATERIALS FOR SALE,

BY PRIVATE CONTRACT:—

ONE 40 inch PUMPING ENGINE, 9 feet stroke.

ONE 30 inch ditto ditto with 9 ton Boiler.

ONE 24 inch STAMPING and PUMPING ENGINE, 9 feet stroke, with two heavy fly wheel and 10 ton boiler and fittings.

ONE 16 head STAMPS AXLE, with heads, lifters, frames, &c., complete, and nearly new.

ONE 16 head STAMPS AXLE, with heads, lifters, and tongues, quite new, never having worked.

ONE 9½ inch horizontal ENGINE, 18 inch stroke, with patent feed water heater and boiler, 16 feet long by 5 feet diameter.

PITWORK in sizes varying from 9 in. to 5 in. diameter, including main rods, caps, bucket rods, ladders, &c.

SIX BALANCE and ANGLE BOSS; shears; 26 inch smiths' bellows, anvil, vice, smiths' and screwing tools; about 200 fathoms launders, various sizes; six nearly new oak tin screws.

Round and other buddles, other tin dressing machinery, and a variety of mining materials, the whole of which are nearly new, and in good condition.

Apply to—

GEORGE EUSTICE and SON, ENGINEERS, HAYLE.

Dated 8th November, 1882.

SECOND-HAND, BUT EQUAL TO NEW:—

STEAM BOILERS.—Three first-class Boilers, 30 ft. by 7 ft., two flues, Galloway tubes in, and fittings, four years old, insured at 75 lbs. pressure. Will be sold cheap.

BOILERS.—Two Boilers, 28 ft. by 7 ft., two flues. Been working at 65 lbs. Price on rails, £120 each.

Other sizes of Boilers in stock, in excellent condition, 28 ft. by 7 ft., 24 ft. by 7 ft., 24 ft. by 6 ft., 20 ft. by 5 ft., 15 ft. by 5 ft., and 12 ft. by 5 ft. Safe for 65 and 80 lbs. pressure. Very cheap.

PUMPING ENGINES.—Beam and Horizontal. Diameters of cylinders, 100 in., 90 in., 65 in., 60 in., and 38 in. Very cheap.

WINDING ENGINES and COLLIERY PLANT of every description, second-hand, in stock.

H. HELLEWELL and CO., 4, NORTH CORRIDOR,

ROYAL EXCHANGE, MANCHESTER.

FOR SALE, TWO PUMP LIFTS, with 16-inch and 11-inch brass-

lined working barrels, 4 feet stroke.

Apply to HENRY HEDLEY, Coppa Colliery, Mold, where the pumps may be inspected.

FOR SALE, a 30 H.P. PORTABLE STEAM ENGINE; with link-motion reversing gear, has drum and gearing complete for winding and pumping.
A 14 H.P. PORTABLE WINDING and PUMPING ENGINE.
Also a 6 H.P. PORTABLE HOISTING ENGINE.
Apply to—
BARROWS and STEWART, ENGINEERS, BANBURY.

RARE OPPORTUNITY.

TO BE SOLD, near Snowdon, a first-class HONE QUARRY. A splendid opening to any gentleman with a few hundred pounds at his disposal to make a rapid fortune. Present owners would be willing to hold a few shares themselves if they could meet with an experienced gentleman who understands the working of quarries.
For full particulars, apply to T. INGHAM, Llanberis.

FOR SALE, ONE SECONDHAND WATER WHEEL, 40 feet diameter by 6 feet breast.

ONE 27 inch ROTARY BEAM ENGINE

Both in good condition TO BE SOLD CHEAP.

Apply to the SANDYCROFT FOUNDRY COMPANY (Limited), near Chester.

THE

ALLEN STEAM ENGINE GOVERNOR develops the utmost Power, gives Uniformity of Speed under varying loads, and Economises Fuel.

ALSO

PEET'S PATENT VALVE TAP, for Steam, Water, and Gas, from ½ inch upwards. Simple, durable, double seats, full way, and all parts interchangeable.

For particulars, apply to—

WHITLEY PARTNERS, RAILWAY WORKS, HUNSLET ROAD, LEEDS.

£20,000 (\$100,000).

THE PURCHASERS of the TOTAL PROPERTY of the VERMONT COPPER MINING COMPANY, having settled with vendors for £20,000 in paying off such amount of their liabilities, DESIRE TO BORROW £20,000, of which £12,000 will pay off the liabilities of vendors, and of which £8,000 will be used in permanent improvements of the property (ore concentration mill). These works have been in profitable operation, producing copper at the rate of 2,500,000 or 3,000,000 lbs. per annum during the last 14 years. The works have ore enough on hand on surface for working off the entire liability.

The purchasers offer for these £20,000 (\$100,000) the same security as was accorded to those already paid—a first mortgage on the total property. Interest will be allowed as if paid on July 1 last at the rate of 6 per cent., and a premium will be accorded on the loan of 10 per cent. in the total stock of the purchasing company, or of \$100=£20, in shares on every £20 loaned. The loaner will elect at his option two directors out of five, and may reserve the treasurer-ship, living either at the works or in Boston or in New York, with a reasonable salary.

No applications will be considered but from absolutely responsible parties.

For description of the property address, F. M. F. CAZIN, General Manager Vermont Copper Works, care of the Editor of the MINING JOURNAL, 26, Fleet-street, London, E.C.
Ely, Vermont, October 23, 1882.

ENGLISH INVESTMENTS IN AMERICAN MINES.

J. TROWBRIDGE BAILEY,
MINING ENGINEER AND EXPERT.
Member American Institute Mining Engineers.

Detailed and Accurate Reports furnished upon Gold, Silver, Copper, Coal, Properties, Mill Enterprises, &c., in Colorado, New Mexico, and the Central Mining Districts of the United States. Titles examined, Maps constructed, and Reliable Information of any nature concerning Mining Interests furnished promptly.

A List of English and American References of high character can be obtained from Messrs. MARCUS WARD and Co., No. 68, Chandos-street, London; or MINING JOURNAL Office.

All communications for Mr. BAILEY should be mailed to—

IDAHO SPRINGS, COLORADO, U.S.

J. A. JONES,
MINING ENGINEER,
GIJON (ASTURIAS), SPAIN.

Mines inspected and reported on. Assays and valuations effected.

Has on hand offers of Mines of Copper, Calamine, Blende, Phosphate

of Lime, Tin, Lead, Iron, Manganese, and Manganiferous

Iron Ores.

T. C. KITTO,
PRACTICAL GEOLOGIST AND MINING ENGINEER,

Who has had great experience in the Gold Mines of Brazil, California, and Australia, having recently examined the Gold Fields of the TRANSVAAL, is prepared to furnish Reliable Reports as to their value.

All kinds of Mineral Deposits carefully examined and properly estimated.

Apply: LULWORTH HOUSE, GUNNERSBURY.

J. S. MERRY,
ASSAYER AND ANALYTICAL CHEMIST,
SWANSEA,
SUPPLIES ASSAY OFFICE REQUIREMENTS AND RE-AGENTS.

TEXT-BOOKS OF SCIENCE.

Now ready, pp. 464, with 130 Woodcuts, of which 25 are new in this Edition, in fep. 8vo., price 5s. cloth.

METALS: THEIR PROPERTIES AND TREATMENT.—

By C. L. BLOXAM,

Prof. of Chem. in King's Coll., London, in the Department of Artillery Studies,

and formerly in the R.M. Acad., Woolwich.

New Edition, partially re-written and augmented by A. K. HUNTINGTON, Prof. of Metallurgy in King's Coll., and Lecturer on Metallurgy to the Medical School of the Dental Hospital, London.

London: LONGMANS and Co.

FOR ONE AND ALL.

THE INDUSTRIES OF CORNWALL: By JAMES QUICK,

Editor of a British Maritime Gazetteer, &c., &c.

At the suggestion of several friends in Cornwall, Mr. Quick is about to reprint in one volume, by subscription (provided a sufficient number of subscribers are forthcoming), several historical and descriptive essays by him on Cornish Mining, the Cornish Engine, the Cornish China-clay Trade, the Pilchard Fisheries, &c., which have appeared in Fraser's Magazine, the Quarterly Journal of Science, the MINING JOURNAL, &c.

Price to subscribers 4s. 6d., which amount should be sent by P. O. O. to Mr. JAMES QUICK, 11, Agnes-street, Burdett-road, London, E.

CAPT. WM. BUGELHOLE (late of Cornwall, England), begs to

inform English Capitalists that he is open to INSPECT and REPORT on

any MINING PROPERTIES in the UNITED STATES, MEXICO, or SOUTH

AMERICA. Fees moderate. First-class English references.

Address, Lansborough, Berkshire County, Massachusetts, United States, North America.

W. TREGAY, MINING ENGINEER, REDRUTH
(Established upwards of a Quarter of a Century)
ADVISES ON ALL MINING MATTERS.

BAINBRIDGE, SEYMOUR, AND RATHBONE,
MINING AND CONSULTING ENGINEERS,
2, GREAT GEORGE STREET,
WESTMINSTER.

CALIFORNIAN AND EUROPEAN AGENCY,
609, MONTGOMERY STREET, SAN FRANCISCO, CAL.
J. JACKSON, Manager.

TO PARENTS AND GUARDIANS.

AN ELIGIBLE OPPORTUNITY is now offered for the SETTLEMENT of an ACTIVE YOUNG GENTLEMAN IN CANADA.

He will be enabled to obtain his profession as a Solicitor in five, or if he be a Graduate in three years. Cost of living about £150. In the meantime he will have active work, and obtain a knowledge of the Dominion, which is destined to become one of the most prosperous of the Colonies. Premium, £100 sterling.

HERBERT C. JONES

32, Wellington-street, Toronto

Canada Land and Loan Agency

NOBEL'S DYNAMITE

Alfred Nobel



Manufactured and sold by
NOBEL'S EXPLOSIVES COMPANY, LIMITED
(FORMERLY THE BRITISH DYNAMITE COMPANY LIMITED),

Head Office: 149, West George Street, Glasgow.

EXPORT AGENTS: J. and G. THORNE, 85, GRACECHURCH STREET, LONDON, E.C.

FACTORIES—ARDEER WORKS, STEVENSTON, Ayrshire.

WESTQUARTER WORKS, POLMONT STATION, STIRLINGSHIRE.

REDDING MOOR WORKS, POLMONT STATION, STIRLINGSHIRE

THE COTTON POWDER COMPANY (LIMITED)

RECOMMEND TO CONTRACTORS, MINERS, PIT SINKERS, QUARRYMEN, AND OTHERS, THEIR

TONITE, OR COTTON POWDER,

AS BEING THE SAFEST, CHEAPEST, AND STRONGEST OF ALL EXPLOSIVES.

TONITE is the most efficient and economical blasting agent ever invented, and is largely in demand. It does not contain any Nitro-glycerine, and is, therefore, exempt from the dangers of exudation, or of freezing and its attendant process of thawing.

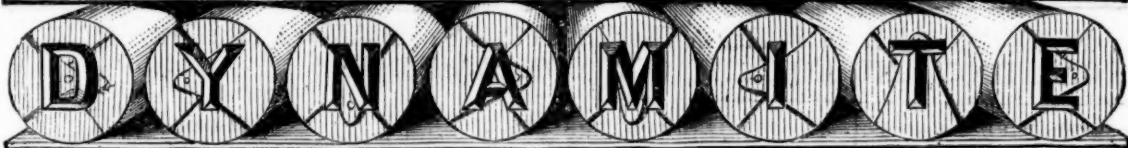
The Company also manufacture PATENT DETONATORS of a quality much superior to the foreign article. The trade supplied on favourable terms.

23, QUEEN ANNE'S GATE, LONDON, S.W.

WORKS: FAVERSHAM, KENT.

Agents: DINEEN and Co., Leeds; DAVID BURNS, Haltwhistle; R. J. CUNNACK, Helston, Cornwall; J. and W. SMITH, Chapel-en-le-Frith; W. VEITCH, Jedburgh, N.B. W. HARRISON, Barrow-in-Furness; W. J. PARRY, Bangor; HUNTER and FOTHERINGHAM, Glasgow.

RHENISH DYNAMITE COMPANY.



OF THE GREATEST STRENGTH ALLOWED BY THE EXPLOSIVES ACT.

Head Office: JOHN DARLINGTON,
2, Coleman Street Buildings, Moorgate Street, London, E.C.
LONDON AGENT—E. KRAFTMEIER & CO., 5, GREAT WINCHESTER STREET BUILDINGS, LONDON, E.C.

THE TUCKINGMILL FOUNDRY COMPANY,

(TUCKINGMILL FOUNDRY AND ROSEWORTHY HAMMER MILLS),

CAMBORNE, CORNWALL,

Engineers, Iron and Brass Founders, &c.



REGISTERED TRADE MARK.

MANUFACTURERS OF EVERY DESCRIPTION OF

REGISTERED TRADE MARK.

PUMPING WINDING AND STAMPING ENGINES

ALL KINDS OF

MINING MACHINERY, SHOVELS, AND MINERS' TOOLS;

ALSO OF

BLAKE'S STONE BREAKERS.

ESTIMATES GIVEN UPON INDENTS AND SPECIFICATIONS.

ILLUSTRATED CATALOGUES POST FREE ON APPLICATION
LONDON OFFICE: 85, GRACECHURCH STREET, E.C.

For Excellence
and Practical Success
of Engines.



Represented
Model exhibited by
this Firm.

HARVEY AND CO.,
ENGINEERS AND GENERAL MERCHANTS
HAYLE, CORNWALL.

LONDON OFFICE.—186, GRESHAM HOUSE, E.C.

MANUFACTURERS OF

PUMPING and other LAND ENGINES and MARINE STEAM ENGINES
of the largest and most approved kinds in use, SUGAR MACHINERY,
MILLWORK, MINING MACHINERY, and MACHINERY IN GENERAL.

SHIPBUILDERS IN WOOD AND IRON.

MANUFACTURERS OF

HUSBAND'S PATENT PNEUMATIC STAMPS

SECOND-HAND MINING MACHINERY FOR SALE,
In Good Condition, at Moderate Prices—viz.

PUMPING ENGINES; WINDING ENGINES; STAMPING ENGINES
STEAM CAPSTANS; ORE CRUSHERS; BOILERS and PITWORK of
various sizes and descriptions; and all kinds of MATERIALS required for
MINING PURPOSES.

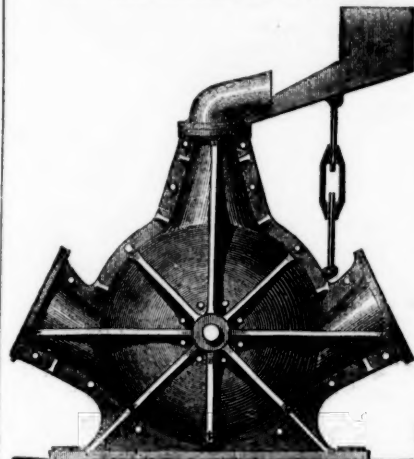
JORDAN'S PATENT PULVERISING MACHINE,

FOR REDUCING

MINERALS, CHEMICALS, CEMENTS, CEREALS, &c

T. B. JORDAN AND SON,

52 GRACECHURCH STREET, LONDON.



SIMPLE.
DURABLE.
EFFECTIVE

OTHER
SPECIALITIES.

GOLD

REDUCING PLANT.

HAND-POWER

ROCK DRILLS

GENERAL

MINING PLANT

Illustrated Cata-
logues on applica-
tion.

THE
BEST METAL FOR BUSHES,
BEARINGS,
SLIDE VALVES,

And other wearing parts of Machinery.

PUMPS, PLUNGERS,
CYLINDERS, &c.

PHOSPHOR BRONZE

WIRE, TUBES,

SHEET, RODS

TOOLS, &c.

STEAM

FITTINGS

SOLE

MANUFACTURERS

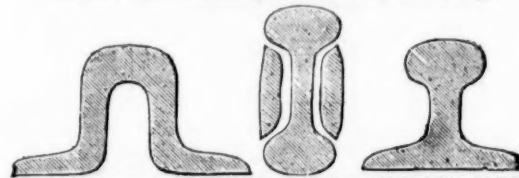
UNDER PATENTS.

THE

**PHOSPHOR BRONZE
COMPANY, LIMITED,**

SUMNER STREET, SOUTHWARK,
LONDON, S.E.

JOHN BEATSON & SON,
40h, St. Mary's Gate, Derby.



IRON AND STEEL RAILS, of all sections, from 10 to 86 lbs. per
yard, new perfect, new slightly defective, or second-hand, with Fish-plates
Bolts and Nuts, Chairs, Spikes, and Points and Crossings to match, when re-
quired.

STEEL AND IRON WIRE ROPES, LOCOMOTIVE ENGINES, &c., &c.

BAR, PLATES, SHEETS, &c.

STEEL OF ALL KINDS. FIG IRON OF ALL KINDS.

Delivered at all Railway Stations and Ports in Great Britain.

WILLIAM BENNETTS.

PATENT MINERS'

SAFETY FUSE

MANUFACTURER.



This manufacture embraces all the latest improvements for use in
Blasting in Mines, Quarries, or for Submarine Purposes; and is
adapted for exploding Gunpowder, Dynamite, or any other Ex-
plosive; and is made suitable for exportation to any part of the world
Price Lists and Sample Cards on application.

All communications to be addressed—

ROSKEAR FUSE WORKS,
CAMBORNE CORNWALL.

SMALL ENOUGH TO CARRY IN THE POCKET ANEROID CASE.

PRACTICAL HYPSONOMETRY: A Method of DETERMINING
ALTITUDES (Heights of Mountains and Depths of Mines) accurately and
almost instantaneously, with the Aneroid Barometer, WITHOUT TABLES.

Price One Shilling, post free
[London: MINING JOURNAL Office 26, Fleet-street, E.C.]

THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.									
Shares.	Divid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.	Divid.	Last wk.	Clos. pr.
3200 Blue Hills, t, c, St. Agnes	10	11	10	10	10	10	10	11	10
6000 Carn Brea, t, c, St. Agnes	10	11	10	10	10	10	10	11	10
10240 Devon Gr. Consols, c, s, Tavistock	10	11	10	10	10	10	10	11	10
4296 Dolcoath, t, c, Camborne	10	11	10	10	10	10	10	11	10
6400 East Pool, t, c, Illogan	10	11	10	10	10	10	10	11	10
12500 Frongoch, t, c, Cardigan (11000 sh. iss.)	10	11	10	10	10	10	10	11	10
12000 Great Holway, t, c, Flintshire	10	11	10	10	10	10	10	11	10
15000 Great Laxey, t, c, Isle of Man	10	11	10	10	10	10	10	11	10
6400 Green Hurth, t, c, Durham	10	11	10	10	10	10	10	11	10
20000 Grosvenor, t, c, Wrexham	10	11	10	10	10	10	10	11	10
10240 Gunrillake (Clitters), t, c	10	11	10	10	10	10	10	11	10
2800 Isle of Man, t, c, Isle of Man	10	11	10	10	10	10	10	11	10
6000 Killfret, t, c, Chancery	10	11	10	10	10	10	10	11	10
20000 Leadhills, t, c, Lancashire	10	11	10	10	10	10	10	11	10
430 Lebourne, t, c, Cardiganshire	10	11	10	10	10	10	10	11	10
10000 Mellanear, t, c, Wrexham	10	11	10	10	10	10	10	11	10
20000 Minera Mining Co., t, c, Wrexham	10	11	10	10	10	10	10	11	10
20000 Mining Co. of Ireland, t, c, t	10	11	10	10	10	10	10	11	10
8000 Mona, t, c, Anglesea	10	11	10	10	10	10	10	11	10
11829 North Hendre, t, c, Wales	10	11	10	10	10	10	10	11	10
8146 Ditto	10	11	10	10	10	10	10	11	10
2000 North Levant, t, c, St. Just	10	11	10	10	10	10	10	11	10
7600 Penhall, t, c, St. Agnes	10	11	10	10	10	10	10	11	10
6000 Penna, t, c, St. Agnes	10	11	10	10	10	10	10	11	10
12000 Phoenix United, t, c, Linkinshire	10	11	10	10	10	10	10	11	10
18000 P. Patrick, t, c, (12000 pf. 10 p.c.)	10	11	10	10	10	10	10	11	10
10000 Red Rock, t, c, Cardigan	10	11	10	10	10	10	10	11	10
12000 Roman Gravel, t, c, Salop	10	11	10	10	10	10	10	11	10
4000 Rhyl, t, c, Wales	10	11	10	10	10	10	10	11	10
6000 South Cardigan, t, c, St. Cleer	10	11	10	10	10	10	10	11	10
6123 South Cardigan, t, c, St. Cleer	10	11	10	10	10	10	10	11	10
9000 South Darnley, t, c, Cardigan	10	11	10	10	10	10	10	11	10
6000 South Wheel Franch, t, c, Illogan	10	11	10	10	10	10	10	11	10
6000 Tincroft, t, c, Pool, Illogan	10	11	10	10	10	10	10	11	10
15000 Van, t, c, Llanidloes	10	11	10	10	10	10	10	11	10
12000 West Holway, t, c, Flintshire	10	11	10	10	10	10	10	11	10
512 West Tolgus, c, Redruth	10	11	10	10	10	10	10	11	10
2400 West Walsby, t, c, Camborne	10	11	10	10	10	10	10	11	10
6000 West Walsby, t, c, Illogan	10	11	10	10	10	10	10	11	10
12000 Wheel Creb, t, c, Tavistock	10	11	10	10	10	10	10	11	10
10240 Wheel Eliza Consols, t, c, Austell	10	11	10	10	10	10	10	11	10
15000 Wheel George, t, c, Carnarvon	10	11	10	10	10	10	10	11	10
6000 Wheel Grenville, t, c, Camborne	10	11	10	10	10	10	10	11	10
4295 Wheel Killy, t, c, St. Agnes	10	11	10	10	10	10	10	11	10
3000 Wheel Peavor, t, c, Redruth	10	11	10	10	10	10	10	11	10

FOREIGN DIVIDEND MINES.

Shares.	Divid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
35500 Almadén, t, Spain	10	11	10	10	10	10
100000 Almadén, t, Spain	10	11	10	10	10	10
20000 Australian, t, South Australia	10	11	10	10	10	10
15000 Birdseye Creek, t, California	10	11	10	10	10	10
20000 Cape Copper Mining, t, South Africa	10	11	10	10	10	10
50000 Copiapó, t, Chile (24 shares)	10	11	10	10	10	10
70000 English & Australian, t, B. Aust.	10	11	10	10	10	10
20000 Eng. Aust., t, Viet. (20000 o.)	10	11	10	10	10	10
25000 Fontana, t, Spain	10	11	10	10	10	10
60000 Frontino, t, Bolivia, New Gran.	10	11	10	10	10	10
200000 La Plata, t, Leadville	10	11	10	10	10	10
15000 Llaneros, t, Spain	10	11	10	10	10	10
18514 Mason & Barry, t, Portugal	10	11	10	10	10	10
60000 New Quebrada, t, Venezuela	10	11	10	10	10	10
10000 Ditto, Debentures	10	11	10	10	10	10
30000 Oregon, t, Oregon, U.S. (pref. sh.)	10	11	10	10	10	10
50000 Pampullico, t, Chile	10	11	10	10	10	10
25000 Pitagui, t, Brazil (in 6000 £1 pd.)	10	11	10	10	10	10
14000 Port Phillip, t, France	10	11	10	10	10	10
100000 Port Phillip, t, France (24 shares)	10	11	10	10	10	10
50000 Rara Fortuna, t, Argent. Republic	10	11	10	10	10	10
54000 Richmond Consol., t, Nevada	10	11	10	10	10	10
24532 Rio Tinto, t, c, Mortgage Bds., Huéla	10	11	10	10	10	10
325000 Ditto, Shares	10	11	10	10	10	10
40000 Santa Barbara, t, Brazil	10	11	10	10	10	10
120000 Santa Barbara, t, Brazil	10	11	10	10	10	10
20000 Sierra Buttes, t, California	10	11	10	10	10	10
40000 Ditto, Plumas Eureka	10	11	10	10	10	10
253000 St. John del Rey (t, 25 Stock and multiple debt in)	10	11	10	10	10	10
160000 Tambora, t, c, Wymad	10	11	10	10	10	10
91596 Tarnish, t, c, Spain (31000 sh. 7 p.c.)	10	11	10	10	10	10
20000 Tarnish, t, c, Spain (31000 sh. 7 p.c.)	10	11	10	10	10	10
25000 Victoria, t, c, Australia	10	11	10	10	10	10
100000 Victorine (Nevada, U.S.) Deb. Bds.	10	11	10	10	10	10
50000 Western Andes, t, Colombia	10	11	10	10	10	10
21000 W. Prussian (55000 pref. sh. £10 pd.)	10	11	10	10	10	10
54000 Yorke Pen., t, South Aust. Pref. sh.	10	11	10	10	10	10

* Have made calls since last dividend was paid.

NON-DIVIDEND BRITISH MINES.

Shares.	Divid.	Last wk.	Clos. pr.
25000 Aberdun, t, Denbigh	10	11	10
30000 Alston United, t, c, Cumberland	10	11	10
12000 Anderton, t, c, t, Devonshire	10	11	10
12000 Asheton, t, c, Carnarvonshire	10	11	10
12000 Bedford Unit, t, c, Tavis (21 lib.)	10	11	10
30000 Bodidris, t, c, Denbighshire	10	11	10
30000 British, t, c, t, Wrexham	10	11	10
30000 Beuno Consols, t, c, Flintshire	10	11	10
20000 Bwlch United, t, c, Cardigan	10	11	10
50000 Carn Camborne, t, c, Camborne	10	11	10
20000 Carnarvon, t, c, Carnarvonshire	10	11	10
27500 Carnarvonshire Cons., t, Llanrwst	10	11	10
6000 Cathedral Cons., t, c, Gwynedd	10	11	10
20000 Central Ffordale, t, c, Isle of Man	10	11	10
25000 Coed-y-Fedw & Pant-y-Buarth, t, c	10	11	10
2450 Cook's Kitchen, t, c, Illogan	10	11	10
10000 Cornwall Great Cons. (4500 issued)	10	11	10
4000 Craignant Bach, t, c, Cardigan	10	11	10
6400 Crook Burn, t, c, Cumberland	10	11	10
45000 D'Eschey Mountain, t, c, Llanrwst	10	11	10
12000 Devon, t, c, t, Tavistock	10	11	10
53000 Devon, t, c, t, Tavistock	10	11	10
60000 Devon Friendship, t, c, t, Tavistock	10	11	10
12000 Devon Great United (21 shares)	10	11	10
50000 Drakewalls, t, c, Calstock	10	11	10
10000 Dobby Syke, t, c, Durham	10	11	10
12000 East Blue Hills, t, c, St. Agnes	10	11	10
6000 East Botallack, t, c, St. Just	10	11	10
6144 East Caradon, t, c, St. Cleer	10	11	10
4000 East Chiverton, t, c, Perranaraboules	10	11	10
30000 East Chiverton, t, c, Perranaraboules	10	11	10
15000 East Devon Cons., t, c, Buckfastleigh	10	11	10
25000 East Herodsfoot, t, c, Liskeard	10	11	10
20000 East Long Rake, t, c, Wales	10	11	10
25000 East Roman Gravel, t, c, Salop	10	11	10
100 East Tregembo, t, c, Marazion	10	11	10
18000 East Van, t, c, Llanidloes	10	11	10
2048 East Wheel Rose, t, c, Helston	10	11	10
10000 East Wheel Rose, t, c, Newlyn East	10	11	10
12000 Gawton, t, c, Tavistock	10	11	10
4000 Glenroy, t, c, t, Isle of Man	10	11	10
10000 Goddard, t, c, t, Carnarvon	10	11	10
32000 Goginan, t, c, Cardiganshire	10	11	10
25000 Goodere, t, c, St. Cleer	10	11	10
5000 Gorseid and Merlyn Con., t, Flint	10	11	10
10000 Great Polgoth United, t, c, Agnes	10	11	10
6000 Great West Chiverton, t, c, Agnes	10	11	10
10000 Gwyn-y-Mynydd, t, c, Flint (pref.)	10	11	10
7000 Gwydyr Amal, t, c, t, Carnarvon	10	11	10
12000 Herodsfoot, t, c, Liskeard	10	11	10
18000 Hingston Down, t, c, Calstock	10	11	10
20000 Kilmichael, t, c, t, (20000 unissued)	10	11	10
25000 Kit Hill Gt. Cons., t, c, t, (21 sh.)	10	11	10
15000 Lady Ann, t, c, Llanarmon	10	11	10
30000 Lady Ashburton, t, c, Callington	10	11	10
25000 Langford, t, c, Callington	10	11	10
15000 Llanegla, t, c, Wales	10	11	10
5120 Lovell, t, c, Wendron	10	11	10
9000 Lovell Valley, t, c, Linkinhorne	10	11	10
20000 Medway, t, c, t, Wendron	10	11	10
20000 Mona Consols, t, c, Anglesea	10	11	10
15000 Monkstoun, t, c, t, Devon	10	11	10
20000 Mynnydd Goginan, t, c, Cardigan	10	11	10
12000 Morfa Du, t, c, t, Anglesea	10	11	10
80000 Mounta Bay, t, c, Breage	10	11	10
6144 Mounta Bay, t, c, Breage	10	11	10
2400 New Colloath, t, c, Camborne	10	11	10
20000 New Great Wheel Vor, t, c, Breage	10	11	10
10000 New Holmshurst, t, c, Callington	10	11	10
6000 New Killy, t, c, St. Agnes	10	11	10
12000 New Penrose, t, c, Helston	10	11	10
50 Chatterley Iron Co. (L.)	10	11	10
17500 New Terras, t, c, St. Austell	10	11	10
3500 New Tincroft, t, c, Lelant	10	11	10
12000 New Trumpet, t, c, Wendron	10	11	10
12000 New West Caradon, t, c, Liskeard	10	11	10
3000 New Wheel Peavor, t, c, Redruth	10	11	10
14000 North Blue Hills, t, c, St. Agnes	10	11	10
5328 North Busy, t, c, Scorrier	10	11	10
10000 N. D'Eschey Mount, t, c, t, Carnarv.	10	11	10
25000 North Goginan, t, c, Cardiganshire	10	11	10

NON-DIVIDEND MINES—continued.

Shares.	Divid.	Last wk.	Clos. pr.
6400 North Green Hurth, * (3400 12. pd.)	0 2	6	1 1/4
25000 North Grosvenor, * & c, Cardigan	1 0	0	1 1/4
12000 North Herodsfoot, t, Liskeard	0 12	6	1 1/4
50000 North Molton, t, c, m, t, c, Devon	1 0	0	1 1/4
8000 North Penstruthal, t, c, Gwynedd	1 0	0	1 1/4
2938 North Treskerby, t, c, St. Agnes	1 0	0	1 1/4
8000 Northern, t, c, t, Durham	8 17	10	1 1/4
4000 Okef Tor, t, c, a, Calstock	1 0	0	1 1/4
8000 Old Shepherds, t, c, Cornwall	1 0	0	1 1/4
6000 Owen Van & Tregur, * & c, Marazion	1 0	0	1 1/4
12000 Pandora, t, c, Carnarvon	1 0	0	1 1/4
45000 Parys Corporation, t, c	1 0	0	1 1/4
7500 Pateley Bridge, t, Yorkshire	1 0	0	1 1/4
12000 Pelpen Wood, t, c, Llanvory	2 13	0	3 3/4
20000 Penegarg, t, Carmarthen	1 0	0	1 1/4
12000 Pen-y-Ore, t, c, t, Flintshire	1 0	0	1 1/4
15000 Perran Consols, *	1 0	0	1 1/4
12000 Perran Wheel Alfred, c	0 2	6	1 1/4
10000 Pioneer, * var. Wales	1 0	0	1 1/4
3000 Polbrebo, t, t, Crownan	0 12	6	1 1/4
10000 Polrose, t, Cornwall	1 2	6	1 1/4
10000 Port Nigel, * & c, Carnarvonshire	2 0	0	1 1/4
8000 Prince Royal, t, c, t, St. Agnes	2 0	0	1 1/4
12000 Prince of Wales, c, s, Calstock	0 17	0	1 1/4
15000 Royalton, t, St. Colum	1 0	0	1 1/4
3000 Russell United, * c, Tavistock	0 15	6	1 1/4
3000 Silver Hill, * Callington	1 0	0	1 1/4
5000 Sinclair, * t, t, Whitford	1 0	0	1 1/4
4000 Northgate, t			